GenCore version 4.5

OM protein - protein search, using sw model

Run on: September 4, 2002, 16:09:10 ; Search time 165.17 Seconds
(without alignments)
147.946 Million cell updates/sec

Title: US-09-052-089A-4
Perfect score: 1075
Sequence: 1 KTIINKLFFDLAQEEENVLD.....DLQSADQEITSLRKKSDDPP 220

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 747574 seqs, 111073796 residues

Total number of hits satisfying chosen parameters: 747574

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_032802:*
1: /SIDS5/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
2: /SIDS5/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
3: /SIDS5/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:*
4: /SIDS5/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:*
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22: /SIDS5/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	920	85.6	469	19	AAW37881	BRCA1 modulator pr
2	920	85.6	469	20	AAY30149	Amino acid sequenc
3	171	15.9	2482	16	AAR72826	Human mitosin. Ho
4	171	15.9	2482	19	AAW23996	Human mitosin amin
5	171	15.9	3248	17	AAR99795	Kinetochore protei
6	170.5	15.9	574	22	AAB95497	Human protein sequ
7	168.5	15.7	1325	18	AAW19540	Male-enhanced anti
8	168.5	15.7	1325	20	AAW94391	Mouse male enhance
9	168	15.6	560	22	AAU31067	Novel human secret
10	168	15.6	576	16	AAR66929	AMML chromosome in
11	168	15.6	816	16	AAR66931	AMML chromosome in
12	168	15.6	885	16	AAR66930	AMML chromosome in
13	167	15.5	561	19	AAW63043	Streptococcus uber
14	166.5	15.5	990	22	AAM78520	Human protein SEQ
15	166	15.4	2056	22	ABB59344	Drosophila melanog
16	165	15.3	1017	22	AAE02246	Domestic mite Btl1
17	164	15.3	875	22	AAE02245	Domestic mite Btl1
18	164	15.3	878	22	AAE02242	Domestic mite Btl1
19	162.5	15.1	931	22	AAM79504	Human protein SEQ
20	160	14.9	1972	17	AAW00024	Smooth muscle myos
21	159.5	14.8	1975	22	ABB62094	Drosophila melanog
22	159	14.8	963	22	AAM78880	Human protein SEQ
23	159	14.8	979	22	AAM79864	Human protein SEQ
24	158.5	14.7	1489	22	ABB59948	Drosophila melanog
25	158.5	14.7	1879	22	AAM25750	Human protein sequ
26	158.5	14.7	2816	22	AAU68572	Human novel cytoki
27	157.5	14.7	746	21	AAG46982	Arabidopsis thalia
28	157.5	14.7	788	21	AAG46981	Arabidopsis thalia
29	157.5	14.7	2139	22	AAB47278	PN7771. Homo sapi
30	155.5	14.5	533	22	AAM79969	Human protein SEQ
31	155	14.4	962	20	AAY31646	Human transport-as
32	154.5	14.4	2067	22	ABB71125	Drosophila melanog
33	154	14.3	896	17	AAR92750	Human EGF receptor
34	154	14.3	896	19	AAW47117	Human eps15 protei
35	154	14.3	896	20	AAW94405	Human eps15 protei
36	154	14.3	1453	22	AAM39213	Human polypeptide
37	154	14.3	1469	22	AAM39214	Human polypeptide
38	154	14.3	1988	22	AAM40999	Human polypeptide
39	154	14.3	1988	22	AAM41000	Human polypeptide
40	153	14.2	1093	14	AAR42818	TMF. Homo sapiens
41	152.5	14.2	1177	22	AAB96721	Putative P. abyssi
42	152	14.1	413	19	AAW46822	Amino acid sequenc
43	152	14.1	2442	21	AAY77575	Human cytoskeletal
44	151.5	14.1	1090	21	AAY59270	Human huntingtin-i
45	151	14.0	455	22	ABB61289	Drosophila melanog

ALIGNMENTS

RESULT 1
AAW37881
ID AAW37881 standard; Protein; 469 AA.
XX
AC AAW37881;
XX
DT 28-AUG-1998 (first entry)
XX
DE BRCA1 modulator protein 091-21A31.
XX
KW BRCA1 modulator protein; 091-21A31; breast cancer antigen 1;
KW tumour suppressor protein; diagnosis; therapy; human.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Domain 3..54
FT /note= "zinc finger motif"
FT Domain 229..255
FT /note= "leucine zipper motif"
XX
PN WO9810066-A1.
XX
PD 12-MAR-1998.
XX
PF 06-AUG-1997; 97WO-US13944.
XX
PR 04-SEP-1996; 96US-0025601.
XX
PA (ONYX-) ONYX PHARM INC.
XX
PI Ligenfelter C, Polakis P, Rubinfeld B, Vuong TT;
XX
DR WPI; 1998-193616/17.

```
DR   N-PSDB; AAV29062.
XX
PT   Breast cancer antigen 1 modulator protein - useful for diagnosing
PT   diseases involving unwanted cell growth, e.g. breast cancer, and for
PT   producing therapeutics for treatment of such diseases
XX
PS   Example 1; Fig 1; 73pp; English.
XX
CC   This polypeptide comprises a 53 kDa BRCA1 modulator protein that
CC   binds to the tumour suppressor gene product BRC1, and which is
CC   characterised by a zinc finger domain and a leucine zipper motif.
CC   Its amino acid sequence was deduced from the nucleotide sequence
CC   of a cDNA clone (see AAV29062), designated 091-21A31 (ATCC 98141),
CC   isolated from a HeLa cell cDNA library using a yeast two-hybrid
CC   assay.  3 cDNA clones (see also AAV29063-64) coding for BRCA1
CC   modulator proteins (see AAW37881-83) have been characterised. Vectors
CC   and host cells comprising the isolated nucleic acid sequences are
CC   claimed, as well as a process for producing BRCA1 modulator protein
CC   by culturing these host cells.  BRCA1 modulator proteins and nucleic
CC   acids can be used to diagnose diseases involving unwanted cell
CC   growth, e.g. breast cancer, and to identify compounds that alter
CC   BRCA1 interaction with BRCA1 modulators for the treatment of such
CC   diseases.
XX
SQ   Sequence   469 AA;


  Query Match             85.6%;  Score 920;  DB 19;  Length 469;
  Best Local Similarity   87.0%;  Pred. No. 1.4e-67;
  Matches  187;  Conservative   18;  Mismatches   10;  Indels    0;  Gaps    0;

Qy       1 KTIINKLFFDLAQEEENVLDAEFLKNELDSVKAQLSQKDREKRDSQAIIDTLRDTLEERN 60
           :|||||||||||||||||||||||||||||:|:|||||||:|||||| ||||||||||||
Db      56 rtiinklffdlaqeeenvldaeflkneldnvraqlsqkdkekrdsqviidtlrdtleern 115

Qy      61 ATVESLQNALNKAEMLCSTLKKQMKFLEQRQDETKQAREEAHRLKCKMKTMEQIELLLQS 120
           ||| ||| || |||||||||||||:|||:|||||||:||| ||: ||||||||||||||
Db     116 atvvslqqalgkaemlcstlkkqmkyleqqqdetkqaqeearrlrskmktmeqielllqs 175

Qy     121 QRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKATGELADRLKKDLVSSRSK 180
           || |||||||||||||||||||||||||||||||||||||:||:||:|:||| |||||
Db     176 qrpeveemirdmgvgqsaveqlavycvslkkeyenlkearkasgevadklrkdlfssrsk 235

Qy     181 LKTLNTELDQAKLELRSAQKDLQSADQEITSLRKK 215
           |:|: :|||||||||:||||||||||:|| ||:||
Db     236 lqtvyseldqaklelksaqkdlqsadkeimslkkk 270


RESULT   2
AAY30149
ID   AAY30149 standard; Protein; 469 AA.
XX
AC   AAY30149;
XX
DT   27-OCT-1999  (first entry)
XX
DE   Amino acid sequence of a BRCA1 modulator protein.
XX
KW   Modulator protein; BRCA1; tumour suppressor protein; breast cancer;
KW   ovarian cancer; cell growth; cell proliferation.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Region          3..32
FT                   /note= "zinc finger motif"
FT   Region          230..255
FT                   /note= "leucine zipper motif"
XX
PN   US5948643-A.
XX
PD   07-SEP-1999.
XX
PF   13-AUG-1997;   97US-0968751.
XX
PR   13-AUG-1997;   97US-0968751.
XX
PA   (ONYX-) ONYX PHARM INC.
XX
PI   Lingenfelter C,  Polakis PG,  Rubinfeld B,  Vuong TT;
XX
DR   WPI; 1999-517952/43.
DR   N-PSDB; AAX86754.
XX
PT   Modulator proteins that bind to and modulate the activity of the
PT   BRCA1 tumour suppressor gene product, useful for the treatment of
PT   ovarian and breast cancer
XX
PS   Example 1; Fig 1; 35pp; English.
XX
CC   The present sequence represents a modulator protein, that binds to and
CC   modulate the activity of the BRCA1 gene product (BRCA1). The BRCA1
CC   protein has been characterized as a tumour suppressor protein.
CC   Alterations in the amino acid sequence of BRCA1 causes breast and ovarian
CC   cancers by removing the controls on cell growth and proliferation.
CC   Research has shown that different regions on the BRCA1 molecule have
CC   different effects on cell growth and tumour suppression (e.g. full length
CC   truncated BRCA1 has no effect on breast cancer cell growth but will
CC   inhibit ovarian cancer cell growth). It has been suggested that different
CC   host cell factors (e.g. proteins) interact with different regions of the
CC   BRCA1 to control its function. The identification of these proteins
CC   (e.g. BRCA1MP) will facilitate the development of novel diagnostic
CC   methods and new therapeutics for identifying and treating cancers caused
CC   by changes in the expression or activity of BRCA1.
XX
SQ   Sequence   469 AA;


  Query Match             85.6%;  Score 920;  DB 20;  Length 469;
  Best Local Similarity   87.0%;  Pred. No. 1.4e-67;
  Matches  187;  Conservative   18;  Mismatches   10;  Indels    0;  Gaps    0;

Qy       1 KTIINKLFFDLAQEEENVLDAEFLKNELDSVKAQLSQKDREKRDSQAIIDTLRDTLEERN 60
           :|||||||||||||||||||||||||||||:|:|||||||:|||||| ||||||||||||
Db      56 rtiinklffdlaqeeenvldaeflkneldnvraqlsqkdkekrdsqviidtlrdtleern 115

Qy      61 ATVESLQNALNKAEMLCSTLKKQMKFLEQRQDETKQAREEAHRLKCKMKTMEQIELLLQS 120
           ||| ||| || |||||||||||||:|||:|||||||:||| ||: ||||||||||||||
Db     116 atvvslqqalgkaemlcstlkkqmkyleqqqdetkqaqeearrlrskmktmeqielllqs 175

Qy     121 QRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKATGELADRLKKDLVSSRSK 180
           || |||||||||||||||||||||||||||||||||||||:||:||:|:||| |||||
Db     176 qrpeveemirdmgvgqsaveqlavycvslkkeyenlkearkasgevadklrkdlfssrsk 235

Qy     181 LKTLNTELDQAKLELRSAQKDLQSADQEITSLRKK 215
           |:|: :|||||||||:||||||||||:|| ||:||
Db     236 lqtvyseldqaklelksaqkdlqsadkeimslkkk 270


RESULT   3
AAR72826
ID   AAR72826 standard; Protein; 2482 AA.
XX
AC   AAR72826;
XX
DT   27-FEB-1996  (first entry)
XX
DE   Human mitosin.
XX
KW   Cell cycle; M phase; mitosin; retinoblastome; mitosis; cell growth;
KW   inhibition.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Region          1480..1659
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FT                  /label= internal_repeat
FT   Region         1660..1839
FT                  /label= internal_repeat
XX
PN   WO9511309-A2.
XX
PD   27-APR-1995.
XX
PF   24-OCT-1994;   94WO-US12162.
XX
PR   22-OCT-1993;   93US-0141239.
XX
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Lee W,  Zhu X;
XX
DR   WPI; 1995-170229/22.
DR   N-PSDB; AAQ86851.
XX
PT   Purified mammalian protein mitosin and agents that bind it and
PT   inhibit its action  - used to promote cell growth or to inhibit cell
PT   division and/or proliferation
XX
PS   Claim 4; Fig 8B; 61pp; English.
XX
CC   AAR72829 is human mitosin. Mitosin is involved in the regulation of
CC   the mammalian mitotic cell cycle. Mitosin as with E2F-1 (see AAR72824)
CC   interacts with the retinoblastoma protein (the retinoblastoma tumour
CC   suppressor gene product). Mitosin is first synthesised at the G1/S
CC   boundary, it is then phosphorylated from S through M phase, and during
CC   mitosis, is closely associated with the centromeres/kinetochores at the
CC   mitotic spindle poles. Mitosin is necessary for a eukaryotic cell to
CC   enter the M phase of the mitotic cell cycle and its degradation is
CC   necessary for a cell to advance on to the next stage. Mitosin is thus
CC   useful for controlling cell growth as overexpression of mitosin prevents
CC   a cell from exiting the M phase.
CC   An anti-mitosin antibody, antibody fragment or a phosphorylated mitosin
CC   mutein ( or nucleic acid encoding it) can also be used to inhibit cell
CC   division which is particularly useful for the study of the cell cycle.
CC   A further use is to control hyperproliferative cells, and so control
CC   diseases such as psoriasis and breast cancer. It can also be used to
CC   block gametogenesis of an immature gamete.
XX
SQ   Sequence   2482 AA;


  Query Match             15.9%;  Score 171;  DB 16;  Length 2482;
  Best Local Similarity   24.3%;  Pred. No. 2.9e-05;
  Matches   69;  Conservative   51;  Mismatches   96;  Indels   68;  Gaps    9;

Qy       1 KTIINKLFFDLAQEEEN----VLDAEFLKNELDSVKAQL------------------SQK 38
           |  :  |  :|   |||    :||||  | |::::| |:                   |:|
Db    1521 kdkvenlerelqmseenqelvildaenskaevetlktqieemarslkvfeldlvtlrsek 1580

Qy      39 D------REKRDSQAIIDTLRDTL---------------EERNATVESLQNALNKAEMLC 77
           :      :||:   : :| |  :               ||    || ||| | :
Db    1581 enltkqiqekqgqlseldkllssfkslleekeqaeiqikeesktavemlqnqlkelneav 1640

Qy      78 STL---KKQMKFLEQRQD----ETKQAREEAHRLKCKMKTMEQIELLLQSQRSE------ 124
           : |   :: ||  ||  |    |  | |    :|: :::  |: :| :  |  |
Db    1641 aalcgdqeimkateqsldppieeehqlrnsieklrarleadekkqlcvlqqlkesehhad 1700

Qy     125 -----VEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKATGELADRLKKDLVSSRS 179
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Db    1701 llkgrvenlereleiartnqehaaleaenskgevetlkakiegmtqslrgleldvvtirs 1760

Qy     180 KLKTLNTELDQ-----AKLEL--RSAQKDLQSADQEITSLRKKS 216
           : : |  || :     ::||:   | :  ||  :||   :::||
Db    1761 ekenltnelqkeqeriseleiinssfenilqekeqekvqmkeks 1804


RESULT   4
AAW23996
ID   AAW23996 standard; Protein; 2482 AA.
XX
AC   AAW23996;
XX
DT   28-MAY-1998  (first entry)
XX
DE   Human mitosin amino acid sequence.
XX
KW   Mitosin; phosphoprotein; mitotic cell cycle; antibody; analogue;
KW   inhibition; M phase; Antagonist; hyperproliferative cell; cancer;
KW   leukaemia; lymphoma; chromosome segregation.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          258..280
FT                   /note= "leucine heptad repaet"
FT   Domain          340..362
FT   Domain          564..593
FT   Domain          1387..1443
FT   Domain          1885..1962
FT   Domain          2146..2188
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FT   Misc-difference 2300
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FT                   /note= "optinally A or T"
XX
PN   US5710022-A.
XX
PD   20-JAN-1998.
XX
PF   24-OCT-1994;   94US-0328254.
XX
PR   24-OCT-1994;   94US-0328254.
PR   22-OCT-1993;   93US-0141239.
XX
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Lee W,  Zhu X;
XX
DR   WPI; 1998-109817/10.
DR   N-PSDB; AAV09076.
XX
PT   New isolated mitosin protein and gene - useful for, e.g. developing
PT   products for therapy and diagnosis of hyper-proliferative disorders
PT   such as cancers or psoriasis
XX
PS   Claim 1; Column 40-52; 43pp; English.
XX
CC   This is the amino acid sequence for mitosin, a phosphoprotein
CC   necessary for the cell to ente mitosis.  The protein's degradation is
CC   also necessary for the cell to advance into the next stages of mitosis.
CC   The mitosin protein, can be used to control the growth of cells.  An
CC   anti-mitosin antibody, a mutant or a non-functional analogue of mitosin
CC   can inhibit the mitotic cell cycle by preventing the cells from entering
CC   the M phase, and over expression of mitosin or its functional
CC   equivalent, would inhibit the cycle by preventing cells from leaving the
CC   M phase. Antagonists to this protein can be used to control
CC   hyperproliferative cells in, (e.g. thyroid hyperplasia, Grave's disease,
CC   psoriasis, benign prostatic hypertrophy, Li-Fraumeni syndrome, breast
CC   cancer, sarcomas and other neoplasms, bladder cancer, colon cancer,
CC   lung cancer and various leukaemias and lymphomas).  Reintroduction or
CC   supplementation of lost mitosin function by introduction of the protein
CC   or nucleic acid encoding the protein into a cell can restore defective
CC   chromosome segregation, which is a marker of progressing malignancy.
CC   Malignant proliferation of cells can then be halted.  The protein
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```
CC   can also be used for the detection and diagnosis of hyperproliferative
CC   cells.
XX
SQ   Sequence   2482 AA;


  Query Match             15.9%;  Score 171;  DB 19;  Length 2482;
  Best Local Similarity   24.3%;  Pred. No. 2.9e-05;
  Matches   69;  Conservative   51;  Mismatches   96;  Indels   68;  Gaps    9;

Qy       1 KTIINKLFFDLAQEEEN----VLDAEFLKNELDSVKAQL------------------SQK 38
           |  :  |  :|   |||    :|||| | |:::::| |:                  |:|
Db    1521 kdkvenlerelqmseenqelvildaenskaevetlktqieemarslkvfeldlvtlrsek 1580

Qy      39 D------REKRDSQAIIDTLRDTL--------------EERNATVESLQNALNKAEMLC 77
           :      :||:   : :| |  :                ||    || ||| | :
Db    1581 enltkqiqekqgqlseldkllssfkslleekeqaeiqikeesktavemlqnqlkelneav 1640

Qy      78 STL---KKQMKFLEQRQD----ETKQAREEAHRLKCKMKTMEQIELLLQSQRSE------ 124
           : |   :: ||  ||  |    |  | |    :|: :::  |: :| :  |  |
Db    1641 aalcgdqeimkateqsldppieeehqlrnsieklrarleadekkqlcvlqqlkesehhad 1700

Qy     125 -----VEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKATGELADRLKKDLVSSRS 179
                ||  : |:: : ::  |  |:   : | | | ||   :   :    |: |:|: ||
Db    1701 llkgrvenlereleiartnqehaaleaenskgevetlkakiegmtqslrgleldvvtirs 1760

Qy     180 KLKTLNTELDQ-----AKLEL--RSAQKDLQSADQEITSLRKKS 216
           : : |  || :     ::||:   | :  ||  :||   :::||
Db    1761 ekenltnelqkeqeriseleiinssfenilqekeqekvqmkeks 1804


RESULT   5
AAR99795
ID   AAR99795 standard; Protein; 3248 AA.
XX
AC   AAR99795;
XX
DT   08-OCT-1996  (first entry)
XX
DE   Kinetochore protein CENP-F.
XX
KW   Kinetochore protein; CENP-F; cell cycle; cancer; diagnosis;
KW   autoimmune antibody.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          1..200
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FT   Domain          280..1350
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FT   Domain          1380..1610
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FT                   /note= "globular domain consists of 2 direct
FT                         repeats of 95 amino acids"
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FT                   /note= "the C-terminal domain is predicted to
FT                         form a proline-rich (10.6%) highly
FT                         basic (pI 10) globular domain"
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XX
PD   13-JUN-1996.
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PF   08-DEC-1995;   95WO-US16216.
XX
PR   09-DEC-1994;   94US-0353700.
XX
PA   (FOXC-) FOX CHASE CANCER CENT.
PA   (UYTE-) UNIV TECHNOLOGIES INT INC.
XX
PI   Rattner JB,  Yen TJ;
XX
DR   WPI; 1996-287116/29.
DR   N-PSDB; AAT34578.
XX
PT   DNA encoding kinetochore protein - used as a marker for the G2 and M
PT   phases of a cell cycle, partic. for detection of malignant diseases
XX
PS   Claim 12; Page 41-54; 72pp; English.
XX
CC   A 372 kDa human kinetochore protein, CENP-F (AAR99795), is detected
CC   by immunofluorescence microscopy only during the G2 and M phases
CC   of a cell cycle.  It is the product of a cDNA clone (AAT34578)
CC   isolated from a breast carcinoma cDNA library.  Recombinant CENP-F
CC   can be produced by expression in prokaryotic or eukaryotic host
CC   cells.  CENP-F can be used to detect autoimmune antibodies to
CC   the protein, which may provide an early diagnosis for the onset
CC   of various malignant diseases.  Use of CENP-F as a cell cycle
CC   marker allows the specific detection of G2 and M phase cells.
XX
SQ   Sequence   3248 AA;


  Query Match             15.9%;  Score 171;  DB 17;  Length 3248;
  Best Local Similarity   24.3%;  Pred. No. 4e-05;
  Matches   69;  Conservative   51;  Mismatches   96;  Indels   68;  Gaps    9;

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           |  :  |  :|   |||    :|||| | |:::::| |:                  |:|
Db    2249 kdkvenlerelqmseenqelvildaenskaevetlktqieemarslkifeldlvtlrsek 2308

Qy      39 D------REKRDSQAIIDTLRDTL--------------EERNATVESLQNALNKAEMLC 77
           :      :||:   : :| |  :                ||    || ||| | :
Db    2309 enltkqiqekqgqlseldkllssfkslleekeqaeiqikeesktavemlqnqlkelneav 2368

Qy      78 STL---KKQMKFLEQRQD----ETKQAREEAHRLKCKMKTMEQIELLLQSQRSE------ 124
           : |   :: ||  ||  |    |  | |    :|: :::  |: :| :  |  |
Db    2369 aalcgdqeimkateqsldppieeehqlrnsieklrarleadekkqlcvlqqlkesehhad 2428

Qy     125 -----VEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKATGELADRLKKDLVSSRS 179
                ||  : |:: : ::  |  |:   : | | | ||   :   :    |: |:|: ||
Db    2429 llkgrvenlereleiartnqehaaleaenskgevetlkakiegmtqslrgleldvvtirs 2488

Qy     180 KLKTLNTELDQ-----AKLEL--RSAQKDLQSADQEITSLRKKS 216
           : : |  || :     ::||:   | :  ||  :||   :::||
Db    2489 ekenltnelqkeqeriseleiinssfenilqekeqekvqmkeks 2532


RESULT   6
AAB95497
ID   AAB95497 standard; Protein; 574 AA.
XX
AC   AAB95497;
XX
DT   26-JUN-2001  (first entry)
XX
DE   Human protein sequence SEQ ID NO:18041.
XX
KW   Human; primer; detection; diagnosis; antisense therapy; gene therapy.
XX
OS   Homo sapiens.
XX
PN   EP1074617-A2.
XX
PD   07-FEB-2001.
XX
PF   28-JUL-2000; 2000EP-0116126.
XX
PR   29-JUL-1999;   99JP-0248036.
PR   27-AUG-1999;   99JP-0300253.
```

```
PR   11-JAN-2000; 2000JP-0118776.
PR   02-MAY-2000; 2000JP-0183767.
PR   09-JUN-2000; 2000JP-0241899.
XX
PA   (HELI-) HELIX RES INST.
XX
PI   Ota T, Isogai T, Nishikawa T, Hayashi K, Saito K, Yamamoto J;
PI   Ishii S, Sugiyama T, Wakamatsu A, Nagai K, Otsuki T;
XX
DR   WPI; 2001-318749/34.
XX
PT   Primer sets for synthesizing polynucleotides, particularly the 5602
PT   full-length cDNAs defined in the specification, and for the detection
PT   and/or diagnosis of the abnormality of the proteins encoded by the
PT   full-length cDNAs -
XX
PS   Claim 8; SEQ ID 18041; 2537pp + CD ROM; English.
XX
CC   The present invention describes primer sets for synthesising 5602
CC   full-length cDNAs defined in the specification. Where a primer set
CC   comprises: (a) an oligo-dT primer and an oligonucleotide complementary
CC   to the complementary strand of a polynucleotide which comprises one of
CC   the 5602 nucleotide sequences defined in the specification, where the
CC   oligonucleotide comprises at least 15 nucleotides; or (b) a combination
CC   of an oligonucleotide comprising a sequence complementary to the
CC   complementary strand of a polynucleotide which comprises a 5'-end
CC   sequence and an oligonucleotide comprising a sequence complementary to a
CC   polynucleotide which comprises a 3'-end sequence, where the
CC   oligonucleotide comprises at least 15 nucleotides and the combination of
CC   the 5'-end sequence/3'-end sequence is selected from those defined in
CC   the specification. The primer sets can be used in antisense therapy and
CC   in gene therapy. The primers are useful for synthesising polynucleotides,
CC   particularly full-length cDNAs. The primers are also useful for the
CC   detection and/or diagnosis of the abnormality of the proteins encoded by
CC   the full-length cDNAs. The primers allow obtaining of the full-length
CC   cDNAs easily without any specialised methods. AAH03166 to AAH13628 and
CC   AAH13633 to AAH18742 represent human cDNA sequences; AAB92446 to
CC   AAB95893 represent human amino acid sequences; and AAH13629 to AAH13632
CC   represent oligonucleotides, all of which are used in the exemplification
CC   of the present invention.
XX
SQ   Sequence   574 AA;


  Query Match             15.9%;  Score 170.5;  DB 22;  Length 574;
  Best Local Similarity   22.3%;  Pred. No. 5.8e-06;
  Matches   59;  Conservative   52;  Mismatches   90;  Indels   63;  Gaps    8;

Qy       1 KTIINKL--FFDLAQEEENVLDAEFLKNELDSVKAQLSQKDREKRDSQAIID---TLRDT 55
           || : ||    ::||:     |  ||:||:  :: || |||||  | :  ::    : :
Db      88 ktkvmklenelemaqqsaggrdtrflrneicqlekqleqkdreledmekelekekkvneq 147

Qy      56 LEERNATVESLQNAL--------NKAEMLCSTLKKQMKFLEQRQDE--TKQAREEAHRLK 105
           |  ||   |:  : |        | | ||  :    | :: :::   ::: :  :| :
Db     148 lalrneeaenensklrrenkrlkkkneqlcqdiidyqkqidsqketllsrrgedsdyrsq 207

Qy     106 CKMKTM---------------EQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSL 149
           |              |:||:  |  |  :|| :::|              :
Db     208 lskknyeliqyldeiqtlteanekievqnqemrknleesvqem--------------ekm 253

Qy     150 KKEYENLKEARKATGELADRLKK-------------DLVSSRSK-----LKTLNTELDQA 191
             ||  :|     |  : |:|||              ||: |:::     :  :| ::::
Db     254 tdeynrmkaivhqtdnvidqlkkendhyqlqvqeltdllkskneeddpimvavnakveew 313

Qy     192 KLELRSAQKDLQSADQEITSLRKK 215
           || | |   ::    | : :||:|
Db     314 klilsskddeiieyqqmlhnlrek 337


RESULT   7
AAW19540
ID   AAW19540 standard; Protein; 1325 AA.
XX
AC   AAW19540;
XX
DT   16-SEP-1997  (first entry)
XX
DE   Male-enhanced antigen-2.
XX
KW   Mouse; MEA-2; detecting mutation.
XX
OS   Mus musculus domesticus.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 305..320
FT                   /note= "Not shown in the specification"
XX
PN   JP09121869-A.
XX
PD   13-MAY-1997.
XX
PF   07-NOV-1995;   95JP-0311638.
XX
PR   07-NOV-1995;   95JP-0311638.
XX
PA   (ITOH-) ITO HAM KK.
XX
DR   WPI; 1997-314229/29.
DR   N-PSDB; AAT74034.
XX
PT   Male-enhanced antigen Mea-2 gene - especially from mouse, useful for
PT   detecting mutation(s)
XX
PS   Claim 8; Page 9-10; 13pp; Japanese.
XX
CC   The present sequence represents male-enhanced antigen-2 (MEA-2), which
CC   has been derived from a domestic mouse. The polynucleotide encoding
CC   the protein can be used for the detection of mutations affecting the
CC   MEA-2 gene.
XX
SQ   Sequence   1325 AA;


  Query Match             15.7%;  Score 168.5;  DB 18;  Length 1325;
  Best Local Similarity   23.8%;  Pred. No. 2.2e-05;
  Matches   69;  Conservative   50;  Mismatches   84;  Indels   87;  Gaps   12;

Qy      10 DLAQEEENVLDA-EFLKNE-------LDSVKAQLSQKDREKR-------DSQAIIDTLRD 54
           :| :| ::  ||  ||:||       | | |:   : ||  |       ::  ::: ||
Db     590 elqreadsredaihflqnekivlevalqsaksdkeeldrgarrleedteetsglleqlrq 649

Qy      55 TLEERNATVESLQNALNKAEMLCSTLKKQM-----KFLEQ-------RQDET------KQ 96
           |  ::  || ||          :||:|||     :|::|       |:| |       :
Db     650 dlavksnqvehlqqe-------tatlrkqmqkvkeqfvqqkvmveayrrdatskdqline 702

Qy      97 AREEAHRLKCKMKTMEQIELLLQSQRSEVE----EMIRDMGVGQSAVEQLAVYCVSLKKE 152
           :    || :|| : |  : || ::  ||     : :|| :   :. :|  :  |::||
Db     703 lkatkkrldsemkelrqeliklqgekktvevehsrlqkdmslvhqqmaeleghlqsvqke 762

Qy     153 YEN----------------LKEA----RKATGELADRLKKDLVSSRSKLKTLNTELDQA 191
           :                  | ||    :|   ||    || :   : |:| | ::|  |
Db     763 rdemeihlqslkfdkeqmialteanetlkkqieelqqeakkaiteqkqkmkrlgsdltsa 822

Qy     192 KLELRSAQKDLQSA----------------DQEITSLRKK----SDDP 219
           : |:::  |  ::|                | |:  || :    | ||
Db     823 qkemktkhkayenavsilsrrlqealaskeatdaelnqlraqstggssdp 872


RESULT   8
AAW94391
ID   AAW94391 standard; Protein; 1325 AA.
XX
AC   AAW94391;
XX
DT   14-APR-1999  (first entry)
XX
```

```
DE   Mouse male enhanced antigen 2.
XX
KW   Mouse; male enhanced antigen 2; Mea-2; Mus musculus domesticus;
KW   spermatogenesis; regulation; contraceptive; sterile; inhibition.
XX
OS   Mus sp.
XX
PN   JP11018622-A.
XX
PD   26-JAN-1999.
XX
PF   04-JUL-1997;   97JP-0179490.
XX
PR   04-JUL-1997;   97JP-0179490.
XX
PA   (ITOH-) ITO HAM KK.
XX
DR   WPI; 1999-160962/14.
DR   N-PSDB; AAX04132.
XX
PT   Regulation of spermatogenesis using Mea-2 gene information  - using
PT   anti-sense oligo- or poly:nucleotide(s), used for production of
PT   contraceptives
XX
PS   Claim 4; Page 8-12; 27pp; Japanese.
XX
CC   The present sequence represents mouse male enhanced antigen 2 (Mea-2).
CC   The present invention describes the regulation of spermatogenesis by
CC   using Mea-2 information. A non-human living organism can have its
CC   spermatogenesis inhibited by breakage of the whole or part of the Mea-2
CC   gene. Also described are: (1) the creation of the spermatogenesis-
CC   inhibited organism; (2) a drug composition containing an oligonucleotide
CC   or polynucleotide containing base sequences that pair with at least part
CC   of the Mea-2 gene and are able to inhibit the expression of Mea-2 gene;
CC   and (3) the creation of an aimed gene-possessing organism using the
CC   spermatogenesis inhibited organism. The organism is useful for producing
CC   contraceptive drugs.
XX
SQ   Sequence   1325 AA;
```

```
  Query Match           15.7%;  Score 168.5;  DB 20;  Length 1325;
  Best Local Similarity  23.8%;  Pred. No. 2.2e-05;
  Matches   69;  Conservative   50;  Mismatches   84;  Indels   87;  Gaps   12;

Qy      10 DLAQEEENVLDA-EFLKNE-------LDSVKAQLSQKDREKR-------DSQAIIDTLRD 54
           :| :| ::  ||  ||:||       | | |:   : ||  |       ::  ::: ||
Db     590 elqreadsredaihflqnekivlevalqsaksdkeeldrgarrleedteetsglleqlrq 649

Qy      55 TLEERNATVESLQNALNKAEMLCSTLKKQM-----KFLEQ-------RQDET------KQ 96
             |  ::  || ||          :||:|||     :|::|       |:| |       :
Db     650 dlavksnqvehlqqe-------tatlrkqmqkvkeqfvqqkvmveayrrdatskdqline 702

Qy      97 AREEAHRLKCKMKTMEQIELLLQSQRSEVE----EMIRDMGVGQSAVEQLAVYCVSLKKE 152
           :    ||  :|| : |  : || ::  ||     : :|| :    : :|  :  |::||  .
Db     703 lkatkkrldsemkelrqeliklqgekktvevehsrlqkdmslvhqqmaeleghlqsvqke 762

Qy     153 YEN-----------------LKEA----RKATGELADRLKKDLVSSRSKLKTLNTELDQA 191
           :                   | ||    :|   ||    || :   : |:| | ::|  |
Db     763 rdemeihlqslkfdkeqmialteanetlkkqieelqqeakkaiteqkqkmkrlgsdltsa 822

Qy     192 KLELRSAQKDLQSA-----------------DQEITSLRKK----SDDP 219
           : |:::  |  ::|                 | |:  || :    | ||
Db     823 qkemktkhkayenavsilsrrlqealaskeatdaelnqlraqstggssdp 872
```

```
RESULT   9
AAU31067
ID   AAU31067 standard; Protein; 560 AA.
XX
AC   AAU31067;
XX
DT   18-DEC-2001  (first entry)
XX
DE   Novel human secreted protein #1558.
XX
KW   Human; vaccination; gene therapy; nutritional supplement;
KW   stem cell proliferation; haematopoiesis; nerve tissue regeneration;
KW   immune suppression; immune stimulation; anti-inflammatory; leukaemia.
XX
OS   Homo sapiens.
XX
PN   WO200179449-A2.
XX
PD   25-OCT-2001.
XX
PF   16-APR-2001; 2001WO-US08656.
XX
PR   18-APR-2000; 2000US-0552929.
PR   26-JAN-2001; 2001US-0770160.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Drmanac RT;
XX
DR   WPI; 2001-611725/70.
XX
PT   Nucleic acids encoding a range of human polypeptides, useful in genetic
PT   vaccination, testing and therapy -
XX
PS   Claim 20; Page 399; 765pp; English.
XX
CC   The invention relates to novel human secreted polypeptides. The
CC   polypeptides and antibodies to the polypeptides are useful for
CC   determining the presence of or predisposition to a disease associated
CC   with altered levels of polypeptide. The polypeptides are also useful for
CC   identifying agents (agonists and antagonists) that bind to them. Cells
CC   expressing the proteins are useful for identifying a therapeutic agent
CC   for use in treatment of a pathology related to aberrant expression or
CC   physiological interactions of the polypeptide. Vectors comprising
CC   the nucleic acids encoding the polypeptides and cells genetically
CC   engineered to express them are also useful for producing the proteins.
CC   The proteins are useful in genetic vaccination, testing and
CC   therapy, and can be used as nutritional supplements. They may be used to
CC   increase stem cell proliferation; to regulate haematopoiesis; and in
CC   bone, cartilage, tendon  and/or nerve tissue growth or regeneration;
CC   immune suppression and/or stimulation; as anti-inflammatory agents; and
CC   in treatment of leukaemias. AAU29510-AAU33304 represent the amino acid
CC   sequences of novel human secreted proteins of the invention.
XX
SQ   Sequence   560 AA;
```

```
  Query Match           15.6%;  Score 168;  DB 22;  Length 560;
  Best Local Similarity  24.2%;  Pred. No. 9e-06;
  Matches   61;  Conservative   52;  Mismatches   91;  Indels   48;  Gaps    9;

Qy      10 DLAQEEENVLDAEFLKNELDSVKAQLSQK----------DREKRDSQAIIDTLRDTLEE 58
           || | :|::  ||  : : |  | :|:::             |||  :| |  | : |||
Db     309 dlmqlqedlaaaerarkqadlekeelaeelasslsgrnalqdekrrlleariaqleeelee 368

Qy      59 RNATVESLQNALNK----AEMLC-------STLKKQMKFLEQRQDETKQAREEAHRL--- 104
             :|:: : : |    || |        || :|     :| : : |: | : | :
Db     369 eqgnmeamsdrvrkatqqaeqlsnelaterstaqknesarqqlerqnkelrsklhemega 428

Qy     105 -KCKMK-TMEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKA 162
            | | | |:  :|  :     :||:  |:    |:| : |      ||:    ::: ||
Db     429 vkskfkstiaaleakiaqleeqveqearek---qaatkslkqkdkklkeillqvederk- 484

Qy     163 TGELADRLKKDLVSSRSKLKTLNTELDQAKLE-------LRSAQKDLQSADQ-------E 208
              :|:: |:      :::| |  :|::|: |        |  |::|  | :       |
Db     485 ---maeqykeqaekgnarvkqlkrqleeaeeesqrinanrrklqreldeatesneamgre 541

Qy     209 ITSLRKKSDDPP 220
           : :|: |   ||
Db     542 vnalksklrgpp 553
```

```
RESULT 10
AAR66929
ID   AAR66929 standard; Protein; 576 AA.
XX
AC   AAR66929;
XX
DT   01-SEP-1995  (first entry)
XX
DE   AMML chromosome inv(16) product.
XX
KW   AMML; acute myelomonocytic leukemia; chromosome-16; inversion;
KW   inv(16); CBF-beta; CBFB gene; transcription factor; myosin; MYH11;
KW   SMMHC.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1..164
FT                   /label= CBFB
FT   Peptide         165..576
FT                   /label= MYH11
XX
PN   WO9504067-A.
XX
PD   09-FEB-1995.
XX
PF   26-JUL-1994;   94WO-US08530.
XX
PR   29-JUL-1993;   93US-0099869.
XX
PA   (UNMI ) UNIV MICHIGAN.
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Claxton D,  Collins FS,  Liu P,  Siciliano MJ;
XX
DR   WPI; 1995-082178/11.
DR   N-PSDB; AAQ84588.
XX
PT   Novel DNA spanning the pericentric inversion of chromosome 16 -
PT   for the screening of acute myeloid leukaemia
XX
PS   Claim 4; Page 28-30; 78pp; English.
XX
CC   PCR was performed on total cellular RNA from 5 AMML patients having
CC   a pericentric inversion of chromosome-16, M4Eo subtype.  Sequencing
CC   showed the inv(16) fusion to comprise a sequence from the CBFB
CC   gene, encoding a novel transcription factor, and the MYH11 gene,
CC   encoding smooth muscle myosin heavy chain.  In 3 patients, nt 1-492
CC   of the CBFB gene were fused to nt 1921 of MYH11 (shown in
CC   AAQ84588; predicted aa sequence in AAR66929).  Probes based on inv(16)
CC   can be used for diagnosis of AMML.
XX
SQ   Sequence   576 AA;


  Query Match           15.6%;  Score 168;  DB 16;  Length 576;
  Best Local Similarity   24.2%;  Pred. No. 9.3e-06;
  Matches   61;  Conservative   52;  Mismatches   91;  Indels   48;  Gaps    9;

Qy      10 DLAQEEENVLDAEFLKNELDSVKAQLSQK----------DREKRDSQAIIDTLRDTLEE 58
           || | :|::  ||  : : |  | :|:::            |||  :| |  | : |||
Db     326 dlmqlqedlaaaerarkqadlekeelaeelasslsgrnalqdekrrleariaqleeelee 385

Qy      59 RNATVESLQNALNK----AEMLC-------STLKKQMKFLEQRQDETKQAREEAHRL--- 104
             :|:: : : |    || |        || :|    :| : : |: | : | :
Db     386 eqgnmeamsdrvrkatqqaeqlsnelaterstaqknesarqqlerqnkelrsklhemega 445

Qy     105 -KCKMK-TMEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKA 162
            | | | |:  :|  :     :||:  |:    |:| : |      ||:    ::: ||
Db     446 vkskfkstiaaleakiaqleeqveqearek---qaatkslkqkdkklkeillqvederk- 501

Qy     163 TGELADRLKKDLVSSRSKLKTLNTELDQAKLE-------LRSAQKDLQSADQ-------E 208
             :|:: |:      :::| |  :|::|: |        |  |::|  | :       |
Db     502 ---maeqykeqaekgnarvkqlkrqleeaeeesqrinanrrklqreldeatesneamgre 558

Qy     209 ITSLRKKSDDPP 220
           : :|: |   ||
Db     559 vnalksklrgpp 570


RESULT 11
AAR66931
ID   AAR66931 standard; Protein; 816 AA.
XX
AC   AAR66931;
XX
DT   01-SEP-1995  (first entry)
XX
DE   AMML chromosome inv(16) product.
XX
KW   AMML; acute myelomonocytic leukemia; chromosome-16; inversion;
KW   inv(16); CBF-beta; CBFB gene; transcription factor; myosin; MYH11;
KW   SMMHC.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1..164
FT                   /label= CBFB
FT   Peptide         165..816
FT                   /label= MYH11
XX
PN   WO9504067-A.
XX
PD   09-FEB-1995.
XX
PF   26-JUL-1994;   94WO-US08530.
XX
PR   29-JUL-1993;   93US-0099869.
XX
PA   (UNMI ) UNIV MICHIGAN.
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Claxton D,  Collins FS,  Liu P,  Siciliano MJ;
XX
DR   WPI; 1995-082178/11.
DR   N-PSDB; AAQ84590.
XX
PT   Novel DNA spanning the pericentric inversion of chromosome 16 -
PT   for the screening of acute myeloid leukaemia
XX
PS   Claim 4; Page 42-46; 78pp; English.
XX
CC   PCR was performed on total cellular RNA from 5 AMML patients having
CC   a pericentric inversion of chromosome-16, M4Eo subtype.  Sequencing
CC   showed the inv(16) fusion to comprise a sequence from the CBFB
CC   gene, encoding a novel transcription factor, and the MYH11 gene,
CC   encoding smooth muscle myosin heavy chain.  In 1 patient, nt 1-492
CC   of the CBFB gene were fused to nt 1201 of MYH11 (shown in
CC   AAQ84590; predicted aa sequence in AAR66931).  Probes based on inv(16)
CC   can be used for diagnosis of AMML.
XX
SQ   Sequence   816 AA;


  Query Match           15.6%;  Score 168;  DB 16;  Length 816;
  Best Local Similarity   24.2%;  Pred. No. 1.4e-05;
  Matches   61;  Conservative   52;  Mismatches   91;  Indels   48;  Gaps    9;

Qy      10 DLAQEEENVLDAEFLKNELDSVKAQLSQK----------DREKRDSQAIIDTLRDTLEE 58
           || | :|::  ||  : : |  | :|:::            |||  :| |  | : |||
Db     566 dlmqlqedlaaaerarkqadlekeelaeelasslsgrnalqdekrrleariaqleeelee 625

Qy      59 RNATVESLQNALNK----AEMLC-------STLKKQMKFLEQRQDETKQAREEAHRL--- 104
```

```
              :|:: : : |    || |       || :|     :| : : |: | : | :
Db    626 eqgnmeamsdrvrkatqqaeqlsnelaterstaqknesarqqlerqnkelrsklhemega 685

Qy    105 -KCKMK-TMEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKA 162
           | | | |:  :|  :     :||:  |:    |:| : |      ||:    ::: ||
Db    686 vkskfkstiaaleakiaqleeqveqearek---qaatkslkqkdkklkeillqvederk- 741

Qy    163 TGELADRLKKDLVSSRSKLKTLNTELDQAKLE-------LRSAQKDLQSADQ-------E 208
             :|:: |:      :::| |  :|::|: |        |  |::|  | :       |
Db    742 ---maeqykeqaekgnarvkqlkrqleeaeeesqrinanrrklqreldeatesneamgre 798

Qy    209 ITSLRKKSDDPP 220
          : :|: |   ||
Db    799 vnalksklrgpp 810


RESULT 12
AAR66930
ID   AAR66930 standard; Protein; 885 AA.
XX
AC   AAR66930;
XX
DT   01-SEP-1995  (first entry)
XX
DE   AMML chromosome inv(16) product.
XX
KW   AMML; acute myelomonocytic leukemia; chromosome-16; inversion;
KW   inv(16); CBF-beta; CBFB gene; transcription factor; myosin; MYH11;
KW   SMMHC.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1..164
FT                   /label= CBFB
FT   Peptide         165..885
FT                   /label= MYH11
XX
PN   WO9504067-A.
XX
PD   09-FEB-1995.
XX
PF   26-JUL-1994;   94WO-US08530.
XX
PR   29-JUL-1993;   93US-0099869.
XX
PA   (UNMI ) UNIV MICHIGAN.
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Claxton D,  Collins FS,  Liu P,  Siciliano MJ;
XX
DR   WPI; 1995-082178/11.
DR   N-PSDB; AAQ84589.
XX
PT   Novel DNA spanning the pericentric inversion of chromosome 16 -
PT   for the screening of acute myeloid leukaemia
XX
PS   Claim 4; Page 34-38; 78pp; English.
XX
CC   PCR was performed on total cellular RNA from 5 AMML patients having
CC   a pericentric inversion of chromosome-16, M4Eo subtype.  Sequencing
CC   showed the inv(16) fusion to comprise a sequence from the CBFB
CC   gene, encoding a novel transcription factor, and the MYH11 gene,
CC   encoding smooth muscle myosin heavy chain.  In 1 patient, nt 1-492
CC   of the CBFB gene were fused to nt 994 of MYH11 (shown in
CC   AAQ84589; predicted aa sequence in AAR66930).  Probes based on inv(16)
CC   can be used for diagnosis of AMML.
XX
SQ   Sequence   885 AA;


  Query Match             15.6%;  Score 168;  DB 16;  Length 885;
  Best Local Similarity   24.2%;  Pred. No. 1.5e-05;
  Matches   61;  Conservative   52;  Mismatches   91;  Indels   48;  Gaps    9;

Qy     10 DLAQEEENVLDAEFLKNELDSVKAQLSQK----------DREKRDSQAIIDTLRDTLEE 58
          || | :|::  ||  : : |  | :|:::           |||  :| |  | : |||
Db    635 dlmqlqedlaaaerarkqadlekeelaeelasslsgrnalqdekrrleariaqleeelee 694

Qy     59 RNATVESLQNALNK----AEMLC-------STLKKQMKFLEQRQDETKQAREEAHRL--- 104
             :|:: : : |    || |        || :|     :| : : |: | : | :
Db    695 eqgnmeamsdrvrkatqqaeqlsnelaterstaqknesarqqlerqnkelrsklhemega 754

Qy    105 -KCKMK-TMEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKA 162
           | | | |:  :|  :     :||:  |:    |:| : |      ||:    ::: ||
Db    755 vkskfkstiaaleakiaqleeqveqearek---qaatkslkqkdkklkeillqvederk- 810

Qy    163 TGELADRLKKDLVSSRSKLKTLNTELDQAKLE-------LRSAQKDLQSADQ-------E 208
             :|:: |:      :::| |  :|::|: |        |  |::|  | :       |
Db    811 ---maeqykeqaekgnarvkqlkrqleeaeeesqrinanrrklqreldeatesneamgre 867

Qy    209 ITSLRKKSDDPP 220
          : :|: |   ||
Db    868 vnalksklrgpp 879


RESULT 13
AAW63043
ID   AAW63043 standard; Protein; 561 AA.
XX
AC   AAW63043;
XX
DT   26-OCT-1998  (first entry)
XX
DE   Streptococcus uberis bovine lactoferrin binding protein.
XX
KW   Bovine lactoferrin binding protein; LBP; mastitis; vaccine;
KW   diagnosis.
XX
OS   Streptococcus uberis strain su-1 (ATCC 9927).
XX
FH   Key             Location/Qualifiers
FT   Peptide         1..51
FT                   /label= Sig_peptide
FT                   /note= "alternative translation start site at
FT                    Met-11"
FT   Protein         52..561
FT                   /label= Mat_protein
FT   Region          148..199
FT                   /note= "central repeated amino acid sequence A1"
FT   Region          200..212
FT                   /note= "central repeated amino acid sequence B1"
FT   Region          213..271
FT                   /note= "central repeated amino acid sequence C1"
FT   Region          282..325
FT                   /note= "central repeated amino acid sequence A2"
FT   Region          326..339
FT                   /note= "central repeated amino acid sequence B2"
FT   Region          340..397
FT                   /note= "central repeated amino acid sequence C2"
FT   Peptide         525..530
FT                   /note= "surface anchor motif"
XX
PN   WO9821231-A2.
XX
PD   22-MAY-1998.
XX
PF   14-NOV-1997;   97WO-CA00867.
XX
PR   14-NOV-1996;   96US-0031117.
XX
PA   (UYSA-) UNIV SASKATCHEWAN.
XX
PI   Jiang M,  Maclachlan PR,  Potter AA;
XX
DR   WPI; 1998-297860/26.
```

```
DR   N-PSDB; AAV42601.
XX
PT   Immunogenic Streptococcus uberis protein(s) that bind bovine
PT   lactoferrin - associated regulatory protein, useful in vaccines for
PT   treatment and prevention of mastitis
XX
PS   Claim 2; Fig 2A-C; 105pp; English.
XX
CC   This is the bovine lactoferrin binding protein (LBP) of
CC   Streptococcus uberis su-1.  Its amino acid sequence was deduced
CC   from the novel isolated lbp gene (see AAV42601).   The LBP is
CC   lactoferrin species-specific; human lactoferrin does not
CC   effectively block binding of bovine lactoferrin.  The invention
CC   provides recombinant vectors, transformed host cells and methods of
CC   producing recombinant bovine LBP of S. uberis.  The bovine LBP,
CC   immunogenic fragments and/or chimeric proteins can be used, either
CC   alone or in combination with other antigens, in novel subunit
CC   vaccines for the prevention and treatment of S. uberis infections,
CC   particularly mastitis, as well as in diagnostic methods for
CC   determining the presence of S. uberis infections.
XX
SQ   Sequence   561 AA;


  Query Match             15.5%;  Score 167;  DB 19;  Length 561;
  Best Local Similarity   24.2%;  Pred. No. 1.1e-05;
  Matches   60;  Conservative   45;  Mismatches   97;  Indels   46;  Gaps    7;

Qy       1 KTIINKLFFDLAQEEENVLDAEFLKN------ELDSVKAQLSQKDREKRDSQAIIDTLRD 54
           | :  ||  | :::|   |  || ::      ||      | : ::   | :|    |::
Db     243 kditekl--dasrkehealakefaesqkgyekeladkhtalgeaekrnadleagnkelke 300

Qy      55 TLEERNATVESLQNALNKAEMLCSTLKKQMKFLEQRQDETKQAREEAHRLKCKMKTMEQI 114
            ||      : ||  : |||       ::|| |  : :|   |:||    | |:   |:
Db     301 nlemaegisddlqkkvmkae-------qemkelsaqlee---akeeletekaklaeseke 350

Qy     115 ELLLQSQR--------------SEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEAR 160
             |  :|               :||::: ::   :   |:|      |:|::| :|  :
Db     351 naklteerdaakkeaekvpeleeqveklveeitaakkeaeelqakaeglekdfeavkaek 410

Qy     161 KATGELADRLKKD-----------LVSSRSKLKTLNTELDQAKLELRSAQKDLQSADQEI 209
           :|      :||:|           |      || |  :||:|| |   | |: | : :|
Db     411 ealeaeiaklkedhqkevdalnalladkekmlknlqdqldkakee---amkneqmsqeek 467

Qy     210 TSLRKKSD 217
             |: : |
Db     468 aklqaeld 475


RESULT  14
AAM78520
ID   AAM78520 standard; Protein; 990 AA.
XX
AC   AAM78520;
XX
DT   06-NOV-2001  (first entry)
XX
DE   Human protein SEQ ID NO 1182.
XX
KW   Human; cytokine; cell proliferation; cell differentiation; gene therapy;
KW   vaccine; peptide therapy; stem cell growth factor; haematopoiesis;
KW   tissue growth factor; immunomodulatory; cancer; leukaemia;
KW   nervous system disorder; arthritis; inflammation.
XX
OS   Homo sapiens.
XX
PN   WO200157190-A2.
XX
PD   09-AUG-2001.
XX
PF   05-FEB-2001; 2001WO-US04098.
XX
PR   03-FEB-2000; 2000US-0496914.
PR   27-APR-2000; 2000US-0560875.
PR   20-JUN-2000; 2000US-0598075.
PR   19-JUL-2000; 2000US-0620325.
PR   01-SEP-2000; 2000US-0654936.
PR   15-SEP-2000; 2000US-0663561.
PR   20-OCT-2000; 2000US-0693325.
PR   30-NOV-2000; 2000US-0728422.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Drmanac RT,  Asundi V,  Zhou P,  Xu C,  Cao Y,  Ma Y;
PI   Zhao QA,  Wang D,  Wang J,  Zhang J,  Ren F,  Chen R,  Wang ZW;
PI   Xue AJ,  Yang Y,  Wejhrman T,  Goodrich R;
XX
DR   WPI; 2001-476283/51.
DR   N-PSDB; AAK51653.
XX
PT   Nucleic acids encoding polypeptides with cytokine-like activities,
PT   useful in diagnosis and gene therapy -
XX
PS   Claim 20; Page 3425-3427; 6221pp; English.
XX
CC   The invention relates to polynucleotides (AAK51456-AAK53435) and the
CC   encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to
CC   cytokine, cell proliferation or cell differentiation or which may induce
CC   production of other cytokines in other cell populations. The
CC   polynucleotides and polypeptides are useful in gene therapy, vaccines or
CC   peptide therapy. The polypeptides have various cytokine-like activities,
CC   e.g. stem cell growth factor activity, haematopoiesis regulating
CC   activity, tissue growth factor activity, immunomodulatory activity and
CC   activin/inhibin activity and may be useful in the diagnosis and/or
CC   treatment of cancer, leukaemia, nervous system disorders, arthritis and
CC   inflammation.
CC   Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666
CC   (AAM80020) are omitted as the relevant pages from the sequence listing
CC   were missing at the time of publication.
XX
SQ   Sequence   990 AA;


  Query Match             15.5%;  Score 166.5;  DB 22;  Length 990;
  Best Local Similarity   25.5%;  Pred. No. 2.3e-05;
  Matches   62;  Conservative   48;  Mismatches   94;  Indels   39;  Gaps    8;

Qy      13 QEEENVLDAEFLKNELDSVKAQLSQKDREKRDSQAI---IDTLRDTLEERNATVESLQNA 69
           : :|   : | ||  |: :||   : :| :   | :      |: |||  |  :: |::
Db     713 enkelesekeqlkkglellkasfkkterlevsyqgldienqrlqktlensnkkiqqlese 772

Qy      70 LNKAEMLCSTLKKQM-------KFLEQRQDETKQAREEAHRLKCKMKTMEQIELLLQSQR 122
           |   ||   ||:| :       | |.|| : | |   :|  :|:   | :|:    |: |
Db     773 lqdlemenqtlqknleelkisskrleqlekenksleqetsqlekdkkqlekenkrlrqqa 832

Qy     123 SEVEEMIRDMGV--------GQSAVEQLAVY---CVSLKK-EYENLKEARKATGELAD-- 168
             :  : :  |          ::  ::: :|   || ||: | || :  ::|| ::
Db     833 eikdttleennvkignlekenktlskeigiykescvrlkelekenkelvkratidiktlv 892

Qy     169 RLKKDLVSSRSKLKTLNTELDQAKLELRS-------AQKDLQSAD--------QEITSLR 213
            |::|||| : | : :| :|::   ||            | || |          :: |
Db     893 tlredlvseklktqqmnndlekltheleklglnkerllhdeqstddsryklleslestl 952

Qy     214 KKS 216
           |||
Db     953 kks 955


RESULT  15
ABB59344
ID   ABB59344 standard; Protein; 2056 AA.
XX
AC   ABB59344;
XX
DT   26-MAR-2002  (first entry)
XX
```

```
DE   Drosophila melanogaster polypeptide SEQ ID NO 4824.
XX
KW   Drosophila; developmental biology; cell signalling; insecticide;
KW   pharmaceutical.
XX
OS   Drosophila melanogaster.
XX
PN   WO200171042-A2.
XX
PD   27-SEP-2001.
XX
PF   23-MAR-2001; 2001WO-US09231.
XX
PR   23-MAR-2000; 2000US-191637P.
PR   11-JUL-2000; 2000US-0614150.
XX
PA   (PEKE ) PE CORP NY.
XX
PI   Venter JC,  Adams M,  Li PWD,  Myers EW;
XX
DR   WPI; 2001-656860/75.
DR   N-PSDB; ABL03447.
XX
PT   New isolated nucleic acid detection reagent for detecting 1000 or more
PT   genes from Drosophila and for elucidating cell signalling and cell-cell
PT   interactions -
XX
PS   Disclosure; SEQ ID NO 4824; 21pp + Sequence Listing; English.
XX
CC   The invention relates to an isolated nucleic acid detection reagent
CC   capable of detecting 1000 or more genes from Drosophila. The invention is
CC   useful in developmental biology and in elucidating cell signalling and
CC   cell-cell interactions in higher eukaryotes for the development of
CC   insecticides, therapeutics and pharmaceutical drugs. The invention
CC   discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA
CC   sequences (ABL01840-ABL16175) and the encoded proteins
CC   (ABB57737-ABB72072).
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence   2056 AA;


  Query Match           15.4%;  Score 166;  DB 22;  Length 2056;
  Best Local Similarity  25.2%;  Pred. No. 6e-05;
  Matches   61;  Conservative   47;  Mismatches   96;  Indels   38;  Gaps    8;

Qy       1 KTIINKLFFDLAQEEENVLDAE--FLKNELDSVKAQLSQKDREKRDSQ----------AI 48
           ||:: |         :  |:||   |  || || :   : || :: ::          |
Db    1302 ktvlek--------akgtleaenadlatelrsvnssrqendrrrkqaesqiaelqvklae 1353

Qy      49 IDTLRDTLEER----NATVESLQNALNKAEMLCSTLKKQMKFLEQRQDETKQAREEAHR- 103
             |:  |  |:|:        |:: | | :||:  |   |    :| :  | :|  ||  |
Db    1354 ierarselqekctklqqeaenitnqleeaelkasaavksasnmesqlteaqqlleeetrq 1413

Qy     104 ---LKCKMKTMEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEAR 160
               |  |:: :|  :  || |  | :|  |:    :  : ::      :||: |   :
Db    1414 klglssklrqiesekealqeqleeddeakrny---erklaevttqmqeikkkaeedadla 1470

Qy     161 KATGELADRLKKDLVSSRSKLKTL---NTELDQAKLELRSAQKD----LQSADQEITSLR 213
           |   |   || ||: :   ::| |   |  ||::| :::|  :|    |::   ::  |
Db    1471 keleegkkrlnkdiealerqvkeliaqndrldkskkkiqseledatieleaqrtkvlele 1530

Qy     214 KK 215
           ||
Db    1531 kk 1532


RESULT  16
AAE02246
ID   AAE02246 standard; Protein; 1017 AA.
XX
AC   AAE02246;
XX
DT   31-JUL-2001  (first entry)
XX
DE   Domestic mite Bt11 allergen polymorphic variant.
XX
KW   Mite; immunogenic protein; Bt allergen; therapy; atopic dermatitis;
KW   immediate hypersensitivity; systemic anaphylaxis; allergic rhinitis;
KW   asthma; antiallergic; antiinflammatory; immunosuppressive.
XX
OS   Blomia tropicalis.
XX
FH   Key             Location/Qualifiers
FT   Misc-difference 41
FT                   /note= "Encoded by TAG"
FT   Misc-difference 42
FT                   /note= "Encoded by TAG"
FT   Misc-difference 56
FT                   /note= "Encoded by TGA"
FT   Misc-difference 71
FT                   /note= "Encoded by TAA"
FT   Misc-difference 76
FT                   /note= "Encoded by TAG"
FT   Misc-difference 80
FT                   /note= "Encoded by TGA"
FT   Misc-difference 86
FT                   /note= "Encoded by TAA"
FT   Misc-difference 965
FT                   /note= "Encoded by TAA"
FT   Misc-difference 998
FT                   /note= "Encoded by TAA"
XX
PN   WO200130817-A1.
XX
PD   03-MAY-2001.
XX
PF   10-OCT-2000; 2000WO-AU01227.
XX
PR   26-OCT-1999;   99SG-0005313.
PR   18-JUL-2000; 2000AU-0008842.
PR   18-JUL-2000; 2000AU-0008844.
PR   18-JUL-2000; 2000AU-0008845.
XX
PA   (UYSI-) UNIV SINGAPORE NAT.
XX
PI   Chua KY,  Cheong N,  Lee BW;
XX
DR   WPI; 2001-308609/32.
DR   N-PSDB; AAD06245.
XX
PT   Novel immunogenic protein derived from house mite, Blomia tropicalis
PT   useful for treating and diagnosing conditions involving induction of
PT   immuneresponse to mite, such as allergic asthma, atopic dermatitis,
PT   rhinitis  -
XX
PS   Claim 6; Fig 7; 230pp; English.
XX
CC   The present invention relates to immunogenic proteins, referred as Bt
CC   allergen, is derived from domestic mite, Blomia tropicalis. The specific
CC   Bt allergens of the invention includes Bt11, Bt10, Bt5 and BtA2. The
CC   immunogenic protein is useful for preventing, reducing or ameliorating
CC   Blomia tropicalis hypersensitivity condition such as atopic dermatitis,
CC   immediate hypersensitivity, systemic anaphylaxis, allergic rhinitis or
CC   asthma and for modulating an immune response directed to Bt allergen in
CC   a subject. The Bt allergens are also useful for detecting antibody
CC   directed to all or a part of Bt allergen in a biological sample from a
CC   subject. Antibodies to Bt allergens are also used as therapeutic or
CC   diagnostic agents, to screen Bt immunoassays and as antagonists to
CC   inhibit Bt activity under circumstances where temporary hypersensitivity
CC   inhibition is required. The present sequence is a protein encoded
CC   by Bt11 polymorphic variant.
XX
SQ   Sequence   1017 AA;
```

```
  Query Match             15.3%;  Score 165;  DB 22;  Length 1017;
  Best Local Similarity   24.5%;  Pred. No. 3.2e-05;
  Matches   57;  Conservative   52;  Mismatches   78;  Indels   46;  Gaps    7;

Qy      21 AEFLKNELDSVKAQL----------------------SQKDREKRDSQAIIDTL----RD 54
           |  |: ||:|:| ||                      | | : : : || :| :    |
Db     346 ahtleveleslkvqleeeesearlelerqltkangdaaswkskyeaelqahvdeveelrrk 405

Qy      55 TLEERNATVESLQNALNKAEMLCSTLKKQMKFLEQRQD----ETKQAREEAHRLKCKMKT 110
             :: :   | |:  |||    || |:||   |:   :    : ::|   |  |: ::
Db     406 maqkiseyeeqleallnk----csalekqkarlqseaevlimdlekatahaqalekrvsq 461

Qy     111 MEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKK---EYENLKEARKATGELA 167
           :|:| | |:|:  ||  ::      :   : | |    |:|   ||| |:: ::|
Db     462 lekinldlkskleevsmll------eqtqkdlrvkiadlqklqheyeklrdqkealaren 515

Qy     168 DRLKKDLVSSRSKLKTLNTELDQAKLE---LRSAQKDLQSADQEITSLRKKSD 217
           :|  ||  ::|:|   :  : : ::|   | : :::| :| :|  :|||: :
Db     516 kkladdlaeaksqlndahrriheqeieikrlenereelaaaykeaetlrkqee 568


RESULT  17
AAE02245
ID   AAE02245 standard; Protein; 875 AA.
XX
AC   AAE02245;
XX
DT   31-JUL-2001  (first entry)
XX
DE   Domestic mite Bt11 allergen.
XX
KW   Mite; immunogenic protein; Bt allergen; therapy; atopic dermatitis;
KW   immediate hypersensitivity; systemic anaphylaxis; allergic rhinitis;
KW   asthma; antiallergic; antiinflammatory; immunosuppressive.
XX
OS   Blomia tropicalis.
XX
PN   WO200130817-A1.
XX
PD   03-MAY-2001.
XX
PF   10-OCT-2000; 2000WO-AU01227.
XX
PR   26-OCT-1999;   99SG-0005313.
PR   18-JUL-2000; 2000AU-0008842.
PR   18-JUL-2000; 2000AU-0008844.
PR   18-JUL-2000; 2000AU-0008845.
XX
PA   (UYSI-) UNIV SINGAPORE NAT.
XX
PI   Chua KY,  Cheong N,  Lee BW;
XX
DR   WPI; 2001-308609/32.
DR   N-PSDB; AAD06237.
XX
PT   Novel immunogenic protein derived from house mite, Blomia tropicalis
PT   useful for treating and diagnosing conditions involving induction of
PT   immuneresponse to mite, such as allergic asthma, atopic dermatitis,
PT   rhinitis  -
XX
PS   Disclosure; Page 162-166; 230pp; English.
XX
CC   The present invention relates to immunogenic proteins, referred to as Bt
CC   allergens, derived from domestic mite (Blomia tropicalis). The specific
CC   Bt allergens of the invention includes Bt11, Bt10, Bt5 and BtA2. The
CC   immunogenic protein is useful for preventing, reducing or ameliorating
CC   Blomia tropicalis hypersensitivity condition such as atopic dermatitis,
CC   immediate hypersensitivity, systemic anaphylaxis, allergic rhinitis or
CC   asthma and for modulating an immune response directed to Bt allergen in
CC   a subject. The Bt allergens are also useful for detecting antibody
CC   directed to all or a part of Bt allergen in a biological sample from a
CC   subject. Antibodies to Bt allergens are also used as therapeutic or
CC   diagnostic agents, to screen Bt immunoassays and as antagonists to
CC   inhibit Bt activity under circumstances where temporary hypersensitivity
CC   inhibition is required. The present sequence is Bt11 allergen.
XX
SQ   Sequence   875 AA;


  Query Match             15.3%;  Score 164;  DB 22;  Length 875;
  Best Local Similarity   24.0%;  Pred. No. 3.2e-05;
  Matches   56;  Conservative   52;  Mismatches   79;  Indels   46;  Gaps    7;

Qy      21 AEFLKNELDSVKAQL----------------------SQKDREKRDSQAIIDTLRDTLEE 58
           |  |: ||:|:| ||                      | | : : : || :| : :   :
Db     257 ahtleveleslkvqleeeesearlelerqltkangdaaswkskyeaelqahvdeveelrrk 316

Qy      59 RNATV----ESLQNALNKAEMLCSTLKKQMKFLEQRQD----ETKQAREEAHRLKCKMKT 110
                :    | |:  |||    || |:||   |:   :    : ::|   |  |: ::
Db     317 maqkiseygeqleallnk----csalekqkarlqsevevlimdlekatahaqalekrvsq 372

Qy     111 MEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKK---EYENLKEARKATGELA 167
           :|:| | |:|:  ||  ::      :   : | |    |:|   ||| |:: ::|
Db     373 lekinldlkskleevsmll------eqtqkdlrvkiadlqklqheyeklrdqkealaren 426

Qy     168 DRLKKDLVSSRSKLKTLNTELDQAKLE---LRSAQKDLQSADQEITSLRKKSD 217
           :|  ||  ::|:|   :  : : ::|   | : :::| :| :|  :|||: :
Db     427 kkladdlaeaksqlndahrriheqeieikrlenereelaaaykeaetlrkqee 479


RESULT  18
AAE02242
ID   AAE02242 standard; Protein; 878 AA.
XX
AC   AAE02242;
XX
DT   31-JUL-2001  (first entry)
XX
DE   Domestic mite Bt11 allergen #7.
XX
KW   Mite; immunogenic protein; Bt allergen; therapy; atopic dermatitis;
KW   immediate hypersensitivity; systemic anaphylaxis; allergic rhinitis;
KW   asthma; antiallergic; antiinflammatory; immunosuppressive.
XX
OS   Blomia tropicalis.
XX
PN   WO200130817-A1.
XX
PD   03-MAY-2001.
XX
PF   10-OCT-2000; 2000WO-AU01227.
XX
PR   26-OCT-1999;   99SG-0005313.
PR   18-JUL-2000; 2000AU-0008842.
PR   18-JUL-2000; 2000AU-0008844.
PR   18-JUL-2000; 2000AU-0008845.
XX
PA   (UYSI-) UNIV SINGAPORE NAT.
XX
PI   Chua KY,  Cheong N,  Lee BW;
XX
DR   WPI; 2001-308609/32.
DR   N-PSDB; AAD06236.
XX
PT   Novel immunogenic protein derived from house mite, Blomia tropicalis
PT   useful for treating and diagnosing conditions involving induction of
PT   immuneresponse to mite, such as allergic asthma, atopic dermatitis,
PT   rhinitis  -
XX
PS   Claim 4; Fig 3; 230pp; English.
XX
CC   The present invention relates to immunogenic proteins, referred as Bt
CC   allergen, is derived from domestic mite, Blomia tropicalis. The specific
CC   Bt allergens of the invention includes Bt11, Bt10, Bt5 and BtA2. The
```

```
CC   immunogenic protein is useful for preventing, reducing or ameliorating
CC   Blomia tropicalis hypersensitivity condition such as atopic dermatitis,
CC   immediate hypersensitivity, systemic anaphylaxis, allergic rhinitis or
CC   asthma and for modulating an immune response directed to Bt allergen in
CC   a subject. The Bt allergens are also useful for detecting antibody
CC   directed to all or a part of Bt allergen in a biological sample from a
CC   subject. Antibodies to Bt allergens are also used as therapeutic or
CC   diagnostic agents, to screen Bt immunoassays and as antagonists to
CC   inhibit Bt activity under circumstances where temporary hypersensitivity
CC   inhibition is required. The present sequence is Btl1 allergen.
XX
SQ   Sequence   878 AA;


  Query Match             15.3%;  Score 164;  DB 22;  Length 878;
  Best Local Similarity   24.0%;  Pred. No. 3.2e-05;
  Matches   56;  Conservative   52;  Mismatches   79;  Indels   46;  Gaps    7;

Qy      21 AEFLKNELDSVKAQL----------------------SQKDREKRDSQAIIDTLRDTLEE 58
           |  |: ||:|:| ||                      | | : : : || :| : :   :
Db     260 ahtleveleslkvqleeesearlelerqltkangdaaswkskyeaelqahvdeveelrrk 319

Qy      59 RNATV----ESLQNALNKAEMLCSTLKKQMKFLEQRQD----ETKQAREEAHRLKCKMKT 110
              :    | |:  |||    || |:|| |:   :    : ::|   |  |: ::
Db     320 maqkiseygeqleallnk----csalekqkarlqsevevlimdlekatahaqalekrvsq 375

Qy     111 MEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKK---EYENLKEARKATGELA 167
           :|:| | |:|:  ||  ::      :   : | |    |:|   ||| |:: ::|
Db     376 lekinldlkskleevsmll------eqtqkdlrvkiadlqklqheyeklrdqkealaren 429

Qy     168 DRLKKDLVSSRSKLKTLNTELDQAKLE---LRSAQKDLQSADQEITSLRKKSD 217
           :|  ||  ::|:|   :  : : ::|   | : :::| :| :|  :|||: :
Db     430 kkladdlaeaksqlndahrriheqeieikrlenereelaaaykeaetlrkqee 482


RESULT  19
AAM79504
ID   AAM79504 standard; Protein; 931 AA.
XX
AC   AAM79504;
XX
DT   06-NOV-2001  (first entry)
XX
DE   Human protein SEQ ID NO 3150.
XX
KW   Human; cytokine; cell proliferation; cell differentiation; gene therapy;
KW   vaccine; peptide therapy; stem cell growth factor; haematopoiesis;
KW   tissue growth factor; immunomodulatory; cancer; leukaemia;
KW   nervous system disorder; arthritis; inflammation.
XX
OS   Homo sapiens.
XX
PN   WO200157190-A2.
XX
PD   09-AUG-2001.
XX
PF   05-FEB-2001; 2001WO-US04098.
XX
PR   03-FEB-2000; 2000US-0496914.
PR   27-APR-2000; 2000US-0560875.
PR   20-JUN-2000; 2000US-0598075.
PR   19-JUL-2000; 2000US-0620325.
PR   01-SEP-2000; 2000US-0654936.
PR   15-SEP-2000; 2000US-0663561.
PR   20-OCT-2000; 2000US-0693325.
PR   30-NOV-2000; 2000US-0728422.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Drmanac RT,  Asundi V,  Zhou P,  Xu C,  Cao Y,  Ma Y;
PI   Zhao QA,  Wang D,  Wang J,  Zhang J,  Ren F,  Chen R,  Wang ZW;
PI   Xue AJ,  Yang Y,  Wejhrman T,  Goodrich R;
XX
DR   WPI; 2001-476283/51.
DR   N-PSDB; AAK52637.
XX
PT   Nucleic acids encoding polypeptides with cytokine-like activities,
PT   useful in diagnosis and gene therapy -
XX
PS   Claim 20; Page 266-267; 6221pp; English.
XX
CC   The invention relates to polynucleotides (AAK51456-AAK53435) and the
CC   encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to
CC   cytokine, cell proliferation or cell differentiation or which may induce
CC   production of other cytokines in other cell populations. The
CC   polynucleotides and polypeptides are useful in gene therapy, vaccines or
CC   peptide therapy. The polypeptides have various cytokine-like activities,
CC   e.g. stem cell growth factor activity, haematopoiesis regulating
CC   activity, tissue growth factor activity, immunomodulatory activity and
CC   activin/inhibin activity and may be useful in the diagnosis and/or
CC   treatment of cancer, leukaemia, nervous system disorders, arthritis and
CC   inflammation.
CC   Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666
CC   (AAM80020) are omitted as the relevant pages from the sequence listing
CC   were missing at the time of publication.
XX
SQ   Sequence   931 AA;


  Query Match             15.1%;  Score 162.5;  DB 22;  Length 931;
  Best Local Similarity   25.1%;  Pred. No. 4.6e-05;
  Matches   61;  Conservative   49;  Mismatches   94;  Indels   39;  Gaps    8;

Qy      13 QEEENVLDAEFLKNELDSVKAQLSQKDREKRDSQAI---IDTLRDTLEERNATVESLQNA 69
           : :|   : | ||  |: :||   : :| :   | :      |: |||  |  :: |::
Db     654 enkelesekeqlkkglellkasfkkterlevsyqgldienqrlqktlensnkkiqqlese 713

Qy      70 LNKAEMLCSTLKKQM-------KFLEQRQDETKQAREEAHRLKCKMKTMEQIELLLQSQR 122
           |   ||   ||:| :       | ||| : | |   :|  :|:   | :|:    |: |
Db     714 lqdlemenqtlqknleelkisskrleqlekenksleqetsqlekdkkqlekenkrlrqqa 773

Qy     123 SEVEEMIRDMGV--------GQSAVEQLAVY---CVSLKK-EYENLKEARKATGELAD-- 168
           :  : :  |          ::  ::: :|   || |:: | || :  ::|| ::
Db     774 eikdttleennvkignlekenktlskeigiykescvrleelekenkelvkratidiktlv 833

Qy     169 RLKKDLVSSRSKLKTLNTELDQAKLELRS-------AQKDLQSAD--------QEITSLR 213
           |::|||| : | : :| :|::   ||            | || |         :: |
Db     834 tlredlvseklktqqmnndlekltheleklglnkerllhdeqstddsryklleskleslestl 893

Qy     214 KKS 216
           |||
Db     894 kks 896


RESULT  20
AAW00024
ID   AAW00024 standard; Protein; 1972 AA.
XX
AC   AAW00024;
XX
DT   25-MAR-1997  (first entry)
XX
DE   Smooth muscle myosin heavy chain SM1 isoform protein.
XX
KW   Smooth muscle; myosin heavy chain; SM1 isoform; rabbit; arteriosclerosis;
KW   gene therapy; mouse; SM2 isoform; retrovirus; adenovirus; restenosis;
KW   associated adenovirus; coronary artery catheterisation; sclerotic artery.
XX
OS   Mus musculus.
XX
PN   WO9623069-A1.
XX
PD   01-AUG-1996.
XX
PF   25-JAN-1996;   96WO-JP00134.
XX
```

PR 25-JAN-1995; 95JP-0010085.
XX
PA (OSAP) OSAKA PREFECTURAL GOVERNMENT.
PA (VESS-) VESSEL RES LAB CO LTD.
XX
PI Arakawa E, Hasegawa K, Ishiyama H, Matsuda Y, Oda S;
PI Sugawara M, Takahashi K;
XX
DR WPI; 1996-362693/36.
DR N-PSDB; AAT34291.
XX
PT DNA encoding smooth muscle myosin heavy chain SM1 isoform - used in
PT a vector for gene therapy for reduction of re-stenosis following
PT coronary artery catheterisation
XX
PS Claim 5; Page 14-27; 42pp; Japanese.
XX
CC This sequence represents the smooth muscle myosin heavy chain SM1 isoform
CC protein. The SM1 coding sequence was isolated from a mouse embryo cDNA
CC library using probes based on the rabbit smooth muscle myosin heavy chain
CC SM2 isoform. The isolated coding sequence is included in the gene
CC therapy vector of the invention. The vector of the invention consists of
CC the coding sequence inserted into a retrovirus, adenovirus, associated
CC adenovirus or animal-expression plasmid vector (such as pCXN2 or
CC PAGE208). The vector can be used in the gene therapy treatment of
CC arteriosclerosis, particularly for the reduction of restenosis occurring
CC following coronary artery catheterisation for widening of sclerotic
CC arteries.
XX
SQ Sequence 1972 AA;

Query Match 14.9%; Score 160; DB 17; Length 1972;
Best Local Similarity 22.3%; Pred. No. 0.00018;
Matches 55; Conservative 53; Mismatches 91; Indels 48; Gaps 7;

```
Qy      10 DLAQEEENVLDAEFLKNELDSVKAQLSQK----------DREKRDSQAIIDTLRDTLEE 58
           || | :|:: || : : | | :|::: |||  :| |  | : |||
Db    1688 dlmqlqedlaaaerarkqadlekeelaeelasslsgrntlqdekrrleariaqleeelee 1747

Qy      59 RNATVESLQNALNKAEMLCSTLKKQMKFLEQRQDETKQAREEAHR---------- 103
             :|:: : : || :   |  ::       : : ||::  |
Db    1748 eqgnmeamsdrvrkatlqaeqlsnelaterstaqknesarqqlerqnkelrsklqevega 1807

Qy     104 LKCKMK-TMEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKA 162
           :| |:| |:  :|  :     :||:  |:    |:| : |      ||:    ::: ||
Db    1808 vkaklkstvaaleakiaqleeqveqearek---qaatkslkqkdkklkevllqvederk- 1863

Qy     163 TGELADRLKKDLVSSRSKLKTLNTELDQAKLE-------LRSAQKDLQSADQ-------E 208
             :|:: |:      :|:| |  :|::|: |        |  |::|  | :       |
Db    1864 ---maeqykeqaekgntkvkqlkrqleeaeeesqcinanrrklqreldeatesneamgre 1920

Qy     209 ITSLRKK 215
           : :|: |
Db    1921 vnalksk 1927
```

RESULT 21
ABB62094
ID ABB62094 standard; Protein; 1975 AA.
XX
AC ABB62094;
XX
DT 26-MAR-2002 (first entry)
XX
DE Drosophila melanogaster polypeptide SEQ ID NO 13074.
XX
KW Drosophila; developmental biology; cell signalling; insecticide;
KW pharmaceutical.
XX
OS Drosophila melanogaster.
XX
PN WO200171042-A2.
XX
PD 27-SEP-2001.
XX
PF 23-MAR-2001; 2001WO-US09231.
XX
PR 23-MAR-2000; 2000US-191637P.
PR 11-JUL-2000; 2000US-0614150.
XX
PA (PEKE) PE CORP NY.
XX
PI Venter JC, Adams M, Li PWD, Myers EW;
XX
DR WPI; 2001-656860/75.
DR N-PSDB; ABL06197.
XX
PT New isolated nucleic acid detection reagent for detecting 1000 or more
PT genes from Drosophila and for elucidating cell signalling and cell-cell
PT interactions -
XX
PS Disclosure; SEQ ID NO 13074; 21pp + Sequence Listing; English.
XX
CC The invention relates to an isolated nucleic acid detection reagent
CC capable of detecting 1000 or more genes from Drosophila. The invention is
CC useful in developmental biology and in elucidating cell signalling and
CC cell-cell interactions in higher eukaryotes for the development of
CC insecticides, therapeutics and pharmaceutical drugs. The invention
CC discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA
CC sequences (ABL01840-ABL16175) and the encoded proteins
CC (ABB57737-ABB72072).
CC The sequence data for this patent did not form part of the printed
CC specification, but was obtained in electronic format directly from WIPO
CC at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 1975 AA;

Query Match 14.8%; Score 159.5; DB 22; Length 1975;
Best Local Similarity 26.5%; Pred. No. 0.0002;
Matches 59; Conservative 46; Mismatches 85; Indels 33; Gaps 9;

```
Qy      13 QEEENVLDAEFLKNELDSVKAQLSQKDREKRDS-QAIIDTLRDTLEERNATVE---SLQN 68
           |||:: |: :  | :: :::| | :| : : |  | : : |  |  :  || |     :
Db    1478 qeeksnletd-rkmkisaiqa-leeklkhrndecqmlrerlaqtemqlaatseengqnee 1535

Qy      69 ALNKAEMLCSTLKKQMKFLEQRQDETKQAREEAHRLKCKMKTME----QIELLLQSQRSE 124
            | |:   || |  : :   | |:|  :    | :|: :   ||    :::: || :
Db    1536 rleksrqqcskldnekr---qlqeelakvegrasklelqrvamegdltrlqmalqekdcs 1592

Qy     125 VEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKATGELADRLKKDLVSS---RSKL 181
           : :|   :     |: ||   | :||   : |||          ||:|  ||    | ::
Db    1593 irqmaerlenqnraltqledrctalkstvdqlke----------rlqksavsetqlrgei 1642

Qy     182 KTLNTELDQA-------KLELRSAQKDLQSADQEITSLRKKSD 217
           |||  || :        : :|:  || ||:|: |   | :: |
Db    1643 ktlqkelseqghcsqanedklklvqkslqtaenekrilterld 1685
```

RESULT 22
AAM78880
ID AAM78880 standard; Protein; 963 AA.
XX
AC AAM78880;
XX
DT 06-NOV-2001 (first entry)
XX
DE Human protein SEQ ID NO 1542.
XX
KW Human; cytokine; cell proliferation; cell differentiation; gene therapy;
KW vaccine; peptide therapy; stem cell growth factor; haematopoiesis;
KW tissue growth factor; immunomodulatory; cancer; leukaemia;
KW nervous system disorder; arthritis; inflammation.
XX
OS Homo sapiens.

```
XX
PN   WO200157190-A2.
XX
PD   09-AUG-2001.
XX
PF   05-FEB-2001; 2001WO-US04098.
XX
PR   03-FEB-2000; 2000US-0496914.
PR   27-APR-2000; 2000US-0560875.
PR   20-JUN-2000; 2000US-0598075.
PR   19-JUL-2000; 2000US-0620325.
PR   01-SEP-2000; 2000US-0654936.
PR   15-SEP-2000; 2000US-0663561.
PR   20-OCT-2000; 2000US-0693325.
PR   30-NOV-2000; 2000US-0728422.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Drmanac RT,  Asundi V,  Zhou P,  Xu C,  Cao Y,  Ma Y;
PI   Zhao QA,  Wang D,  Wang J,  Zhang J,  Ren F,  Chen R,  Wang ZW;
PI   Xue AJ,  Yang Y,  Wejhrman T,  Goodrich R;
XX
DR   WPI; 2001-476283/51.
DR   N-PSDB; AAK52013.
XX
PT   Nucleic acids encoding polypeptides with cytokine-like activities,
PT   useful in diagnosis and gene therapy -
XX
PS   Claim 20; Page 3856-3858; 6221pp; English.
XX
CC   The invention relates to polynucleotides (AAK51456-AAK53435) and the
CC   encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to
CC   cytokine, cell proliferation or cell differentiation or which may induce
CC   production of other cytokines in other cell populations. The
CC   polynucleotides and polypeptides are useful in gene therapy, vaccines or
CC   peptide therapy. The polypeptides have various cytokine-like activities,
CC   e.g. stem cell growth factor activity, haematopoiesis regulating
CC   activity, tissue growth factor activity, immunomodulatory activity and
CC   activin/inhibin activity and may be useful in the diagnosis and/or
CC   treatment of cancer, leukaemia, nervous system disorders, arthritis and
CC   inflammation.
CC   Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666
CC   (AAM80020) are omitted as the relevant pages from the sequence listing
CC   were missing at the time of publication.
XX
SQ   Sequence   963 AA;


  Query Match             14.8%;  Score 159;  DB 22;  Length 963;
  Best Local Similarity   24.2%;  Pred. No. 9.3e-05;
  Matches   57;  Conservative   48;  Mismatches   93;  Indels   38;  Gaps    6;

Qy      10 DLAQEE-ENVLDAEFLKNELDSVKAQLSQKDREKRDSQAIIDTLRDTLEERNATVESLQN 68
           | ::|| : || |      |: :     || :|  |     : | | | :::||: |:
Db     482 daskeevkevlqa------leelavnydqksqevedktkeyellsdelnqksatlasida 535

Qy      69 ALNK------------AEMLCSTLK-------------KQMKFLEQRQDETKQAREEAH 102
            | |            |||: | ||             || :      :|   ||
Db     536 elqklkemtnhqkkraaemmasllkdlaeigiavgnndvkqpegtgmideeftvarlyis 595

Qy     103 RLKCKMKTM----EQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKE 158
           ::| ::|||    :|:|       ::||  :::   |  : |      || :  :|:::
Db     596 kmksevktmvkrckqlestqtesnkkmeenekelaacqlrisqheakikslteylqnveq 655

Qy     159 ARKATGELADRLKKDLVSSRSKLKTLNTELDQAKLELRSAQKDLQSADQEITSLRK 214
           ::   |  | | ::||  |:: |    | :    ::::| :  |: :|:| | |:
Db     656 kkrqleesvdalseelvqlraqekvhemekehln-kvqtanevkqaveqqiqshre 710


RESULT  23
AAM79864
ID   AAM79864 standard; Protein; 979 AA.
XX
AC   AAM79864;
XX
DT   06-NOV-2001  (first entry)
XX
DE   Human protein SEQ ID NO 3510.
XX
KW   Human; cytokine; cell proliferation; cell differentiation; gene therapy;
KW   vaccine; peptide therapy; stem cell growth factor; haematopoiesis;
KW   tissue growth factor; immunomodulatory; cancer; leukaemia;
KW   nervous system disorder; arthritis; inflammation.
XX
OS   Homo sapiens.
XX
PN   WO200157190-A2.
XX
PD   09-AUG-2001.
XX
PF   05-FEB-2001; 2001WO-US04098.
XX
PR   03-FEB-2000; 2000US-0496914.
PR   27-APR-2000; 2000US-0560875.
PR   20-JUN-2000; 2000US-0598075.
PR   19-JUL-2000; 2000US-0620325.
PR   01-SEP-2000; 2000US-0654936.
PR   15-SEP-2000; 2000US-0663561.
PR   20-OCT-2000; 2000US-0693325.
PR   30-NOV-2000; 2000US-0728422.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Drmanac RT,  Asundi V,  Zhou P,  Xu C,  Cao Y,  Ma Y;
PI   Zhao QA,  Wang D,  Wang J,  Zhang J,  Ren F,  Chen R,  Wang ZW;
PI   Xue AJ,  Yang Y,  Wejhrman T,  Goodrich R;
XX
DR   WPI; 2001-476283/51.
DR   N-PSDB; AAK52997.
XX
PT   Nucleic acids encoding polypeptides with cytokine-like activities,
PT   useful in diagnosis and gene therapy -
XX
PS   Claim 20; Page 365-366; 6221pp; English.
XX
CC   The invention relates to polynucleotides (AAK51456-AAK53435) and the
CC   encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to
CC   cytokine, cell proliferation or cell differentiation or which may induce
CC   production of other cytokines in other cell populations. The
CC   polynucleotides and polypeptides are useful in gene therapy, vaccines or
CC   peptide therapy. The polypeptides have various cytokine-like activities,
CC   e.g. stem cell growth factor activity, haematopoiesis regulating
CC   activity, tissue growth factor activity, immunomodulatory activity and
CC   activin/inhibin activity and may be useful in the diagnosis and/or
CC   treatment of cancer, leukaemia, nervous system disorders, arthritis and
CC   inflammation.
CC   Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666
CC   (AAM80020) are omitted as the relevant pages from the sequence listing
CC   were missing at the time of publication.
XX
SQ   Sequence   979 AA;


  Query Match             14.8%;  Score 159;  DB 22;  Length 979;
  Best Local Similarity   24.2%;  Pred. No. 9.5e-05;
  Matches   57;  Conservative   48;  Mismatches   93;  Indels   38;  Gaps    6;

Qy      10 DLAQEE-ENVLDAEFLKNELDSVKAQLSQKDREKRDSQAIIDTLRDTLEERNATVESLQN 68
           | ::|| : || |      |: :     || :|  |     : | | | :::||: |:
Db     497 daskeevkevlqa------leelavnydqksqevedktkeyellsdelnqksatlasida 550

Qy      69 ALNK------------AEMLCSTLK-------------KQMKFLEQRQDETKQAREEAH 102
            | |            |||: | ||             || :      :|   ||
Db     551 elqklkemtnhqkkraaemmasllkdlaeigiavgnndvkqpegtgmideeftvarlyis 610

Qy     103 RLKCKMKTM----EQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKE 158
```

```
          ::| ::|||    :|:|        ::||  :::   |  : |      || :  :|:::
Db    611 kmksevktmvkrckqlestqtesnkkmeenekelaacqlrisqheakikslteylqnveq 670

Qy    159 ARKATGELADRLKKDLVSSRSKLKTLNTELDQAKLELRSAQKDLQSADQEITSLRK 214
           ::   |  | | ::||  |:: |    | :    ::::| :  |: :|:| | |:
Db    671 kkrqleesvdalseelvqlraqekvhemekehln-kvqtanevkqaveqqiqshre 725


RESULT  24
ABB59948
ID   ABB59948 standard; Protein; 1489 AA.
XX
AC   ABB59948;
XX
DT   26-MAR-2002  (first entry)
XX
DE   Drosophila melanogaster polypeptide SEQ ID NO 6636.
XX
KW   Drosophila; developmental biology; cell signalling; insecticide;
KW   pharmaceutical.
XX
OS   Drosophila melanogaster.
XX
PN   WO200171042-A2.
XX
PD   27-SEP-2001.
XX
PF   23-MAR-2001; 2001WO-US09231.
XX
PR   23-MAR-2000; 2000US-191637P.
PR   11-JUL-2000; 2000US-0614150.
XX
PA   (PEKE ) PE CORP NY.
XX
PI   Venter JC,  Adams M,  Li PWD,  Myers EW;
XX
DR   WPI; 2001-656860/75.
DR   N-PSDB; ABL04051.
XX
PT   New isolated nucleic acid detection reagent for detecting 1000 or more
PT   genes from Drosophila and for elucidating cell signalling and cell-cell
PT   interactions -
XX
PS   Disclosure; SEQ ID NO 6636; 21pp + Sequence Listing; English.
XX
CC   The invention relates to an isolated nucleic acid detection reagent
CC   capable of detecting 1000 or more genes from Drosophila. The invention is
CC   useful in developmental biology and in elucidating cell signalling and
CC   cell-cell interactions in higher eukaryotes for the development of
CC   insecticides, therapeutics and pharmaceutical drugs. The invention
CC   discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA
CC   sequences (ABL01840-ABL16175) and the encoded proteins
CC   (ABB57737-ABB72072).
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence   1489 AA;


  Query Match             14.7%;  Score 158.5;  DB 22;  Length 1489;
  Best Local Similarity   24.2%;  Pred. No. 0.00017;
  Matches   72;  Conservative   37;  Mismatches  106;  Indels   83;  Gaps    9;

Qy      1 KTIINKLFFDLAQEEENVLDAEFLKNELDSVKAQLSQKDREKRDSQAIIDTLRDTLEERN 60
          |::  |      |||||||    |     ::  :|  || | |  |  :  |    |  |
Db    298 ksvtekyeavrkqeeenvl---llaqtkqaihtelelkdtevrklqeklkqlesqreshn 354

Qy     61 -----------ATVESLQNALNKAEMLCSTLKKQMKFLEQR------------------ 90
                     || : :   |   | | :|||:     ||:
Db    355 nevkeqfkklqatkqevdaklmatehlllntlkesyaikeqqvvtleaqleairveneqkv 414

Qy     91 -------QDETKQAREEAHRLKCKMKTMEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLA 143
                :|   || : : :||     ::  |  | |:   :| :  :    :  :: |
Db    415 kdlqkqnedrntqasdsseqlkklqaavqdaesqllskdqlleslrseqaakeqqlkhlk 474

Qy    144 VYCVSLKKEYEN----LKEARKA----TGELADRLKK---------------DLVSS-- 177
             ||:| ||    |:| :|:    | |  |: ||               :|: |
Db    475 eqlgklkqenenyldklrenkkssdsqtneaqdqqkklqaakdeaeskllateellhslr 534

Qy    178 -------------RSKLKTLNTELD--QAKLELRSAQKDLQSAD--QEITSLRKKSDD 218
                        ||||: | |    ||   : |:: || |  |:|  ||   |:
Db    535 ndykaqeekvalledklktlskendvnveklhhineqreaqstdsqqkinelraakde 592


RESULT  25
AAM25750
ID   AAM25750 standard; Protein; 1879 AA.
XX
AC   AAM25750;
XX
DT   16-OCT-2001  (first entry)
XX
DE   Human protein sequence SEQ ID NO:1265.
XX
KW   Human; cancer; ulcer; HIV infection; human immunodeficiency virus;
KW   antiinflammatory; antirheumatic; antiarthritic; immunosuppressive;
KW   antibacterial; endocrine; cardiant; central nervous system; virucide;
KW   anti-HIV; fungicide; antimutagen; cardiovascular; antianaemic; anaemia;
KW   antiaggregant; haemostatic; vulnerary; antiulcer; osteopathic; eczema;
KW   dermatological; antiallergic; antiasthmatic; antidiabetic; cytostatic;
KW   neuroprotective; antidepressant; nootropic; antiparkinsonian; infection;
KW   immunostimulant; gene therapy; antisense therapy; vaccine; inflammation;
KW   antianaphylactic; rheumatoid arthritis; septic shock; pancreatitis;
KW   cardiac dysfunction; neuropathology; cardiac anaphylaxis; autoimmunity;
KW   genetic disease; haematopoietic disorder; platelet disorder; asthma;
KW   thrombocytopaenia; osteoporosis; severe combined immunodeficiency;
KW   allergic rhinitis; diabetes; multiple sclerosis; depression;
KW   Alzheimer's disease; Parkinson's disease; neurodegenerative disorder;
KW   neurological disorder.
XX
OS   Homo sapiens.
XX
PN   WO200153455-A2.
XX
PD   26-JUL-2001.
XX
PF   22-DEC-2000; 2000WO-US35017.
XX
PR   23-DEC-1999;   99US-0471275.
PR   21-JAN-2000; 2000US-0488725.
PR   25-APR-2000; 2000US-0552317.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Drmanac RT;
XX
DR   WPI; 2001-457603/49.
DR   N-PSDB; AAH99691.
XX
PT   Isolated human polynucleotides encoding polypeptides, useful for the
PT   treatment and diagnosis of e.g. cancer, ulcers and HIV infection -
XX
PS   Claim 20; Page 262; 1217pp; English.
XX
CC   AAH99166 to AAH99904 encode the human proteins given in AAM25225 to
CC   AAM25963. The proteins can have activities based on the tissues and
CC   cells they are expressed in, such as: antiinflammatory; antirheumatic;
CC   antiarthritic; immunosuppressive; antibacterial; endocrine; cardiant;
CC   central nervous system; virucide; anti-HIV; fungicide; antimutagen;
CC   cardiovascular; antianaemic; antiaggregant; haemostatic; vulnerary;
CC   antiulcer; osteopathic; dermatological; antiallergic; antiasthmatic;
CC   antidiabetic; cytostatic; neuroprotective; antidepressant; nootropic;
CC   antiparkinsonian; and immunostimulant. The proteins and polynucleotides
CC   encoding them can be used in gene therapy, antisense therapy and vaccine
CC   production, The proteins and polynucleotides are useful for screening for
```

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CC   agonists or antagonists of a protein and for the treatment and diagnosis
CC   of disorders associated with the activity of a protein e.g. inflammation,
CC   rheumatoid arthritis, septic shock, pancreatitis, cardiac dysfunction,
CC   neuropathology, cardiac anaphylaxis, viral, bacterial, HIV and fungal
CC   infections, autoimmunity, genetic diseases, haematopoietic disorders,
CC   anaemia, platelet disorders, thrombocytopaenia, wounds, burns, ulcers,
CC   osteoporosis, severe combined immunodeficiency, eczema, allergic
CC   rhinitis, asthma, diabetes, cancer, multiple sclerosis, depression,
CC   Alzheimer's disease, Parkinson's disease, neurodegenerative and
CC   neurological disorders.
XX
SQ   Sequence   1879 AA;


  Query Match             14.7%;  Score 158.5;  DB 22;  Length 1879;
  Best Local Similarity   25.4%;  Pred. No. 0.00022;
  Matches   61;  Conservative   49;  Mismatches   89;  Indels   41;  Gaps   10;

Qy      10 DLAQEEENVLDAEFLKNEL-DSVKAQLSQKDR---EKRDSQAIIDTLRDTLEERNATVES 65
           ||| ||    |: | || : : : || ::    ||| :| |  | : |||    :|:
Db    1602 dlaaaeegrkqadlekeelaeelasslsgrnalqdekrrleariaqleeeleeeqgnmea 1661

Qy      66 LQNALNK----AEMLC-------STLKKQMKFLEQRQDETKQAREEAHRL----KCKMK- 109
           : : : |    || |        || :|     :| : : |: | : | :    | | |
Db    1662 msdrvrkatqqaeqlsnelaterstaqknesarqqlerqnkelrsklhemegavkskfks 1721

Qy     110 TMEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKATGELADR 169
           |: :| :    :||:  |:    |:| : |      ||:    ::: ||    :|::
Db    1722 tiaaleakiaqleeqveqearek---qaatkslkqkdkklkeillqvederk----maeq 1774

Qy     170 LKKDLVSSRSKLKTLNTELDQAKLE-------LRSAQKDLQSADQ-------EITSLRKK 215
           |:      :::| |  :|::|: |        |  |::|  | :       |: :|: |
Db    1775 ykeqaekgnarvkqlkrqleeaeeesqrinanrrklqreldeatesneamgrevnalksk 1834


RESULT  26
AAU68572
ID   AAU68572 standard; Protein; 2816 AA.
XX
AC   AAU68572;
XX
DT   16-JAN-2002  (first entry)
XX
DE   Human novel cytokine encoded by cDNA 790CIP2B_6 #2.
XX
KW   Human; cytokine; cell proliferation; cell differentiation;
KW   antiinflammatory; stem cell growth factor; activin; inhibin; cancer;
KW   nervous system disease; neuropathy; Alzheimer's disease;
KW   Parkinson's disease; Huntington's disease; spinal cord disorder;
KW   head trauma; stroke; myeloid cell disorder; lymphoid cell disorder;
KW   platelet disorder; thrombocytopaenia; stem cell disorder;
KW   aplastic anaemia; tissue regeneration; wound healing; ulcer;
KW   osteoporosis; osteoarthritis; bone degenerative disorder;
KW   periodontal disease; fibrosis; reperfusion; immune disorder; SCID;
KW   severe combined immunodeficiency; infection; autoimmune disorder;
KW   multiple sclerosis; rheumatoid arthritis; diabetes mellitus; allergy;
KW   asthma; coagulation disorder; haemophilia; sepsis; nephritis;
KW   inflammatory bowel disease; food supplement; immunogen.
XX
OS   Homo sapiens.
XX
PN   WO200175093-A1.
XX
PD   11-OCT-2001.
XX
PF   30-MAR-2001; 2001WO-US10484.
XX
PR   31-MAR-2000; 2000US-0540217.
PR   23-AUG-2000; 2000US-0649167.
PR   22-SEP-2000; 2000US-0668680.
PR   23-OCT-2000; 2000US-0695618.
PR   30-NOV-2000; 2000US-0728711.
PR   14-MAR-2001; 2000US-0728711.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Asundi V,  Zhou P,  Xue AJ,  Ren F,  Zhang J,  Wang J,  Xu C;
PI   Yang Y,  Zaho QA,  Chen R,  Wang D,  Goodrich RW,  Liu C,  Drmanac RT;
XX
DR   WPI; 2001-626432/72.
DR   N-PSDB; AAS59864.
XX
PT   New polypeptides and nucleic acids, useful for diagnosis, treatment of
PT   inflammatory, autoimmune, neurological, myeloid or lymphoid cell, bone
PT   degenerative disorders, cancer and promoting wound healing  -
XX
PS   Claim 20; Page 313-319; 336pp; English.
XX
CC   The invention relates to isolated human polypeptides (which may be
CC   cytokines) and the polynucleotides encoding them. The protein is useful
CC   for identifying a compound which binds to it (e.g. modulators, agonists
CC   and antagonists). The polynucleotides are useful as an array for mismatch
CC   detection. The proteins and nucleic acids are useful as nutritional
CC   sources or supplements. The protein exhibits exhibits activity relating
CC   to cytokine, cell proliferation, cell differentiation, antiinflammatory,
CC   stem cell growth factor activity, immune stimulating or immune
CC   suppressing and activin or inhibin related activities. The proteins (and
CC   antibodies raised against them) and nucleic acids are therefore useful in
CC   the diagnosis and treatment of diseases and disorders such as cancer,
CC   central and peripheral nervous system diseases and neuropathies,
CC   Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic
CC   lateral sclerosis, spinal cord disorders, head trauma, cerebrovascular
CC   diseases, stroke, myeloid or lymphoid cell disorders, platelet disorders,
CC   thrombocytopaenia, stem cell disorders, aplastic anaemia, for
CC   regeneration of bone, cartilage, tendon, ligament and/or nerve tissue
CC   growth, and in tissue repair, healing of burns, incisions, ulcers, for
CC   treating osteoporosis, osteoarthritis, bone degenerative disorders, or
CC   periodontal disease, lung or liver fibrosis, reperfusion injury in
CC   various tissues, various immune deficiencies and disorders including
CC   severe combined immunodeficiency (SCID), bacterial or fungal infections,
CC   autoimmune disorders (e.g. multiple sclerosis, rheumatoid arthritis,
CC   diabetes mellitus, myasthenia gravis), allergic reactions and conditions,
CC   such as asthma or other respiratory problems, coagulation disorders,
CC   haemophilia), septic shock, sepsis, arthritis, nephritis and inflammatory
CC   bowel disease, viral infection and are useful in altering bodily
CC   characteristics. The present sequence represents a novel protein of the
CC   invention.
XX
SQ   Sequence   2816 AA;


  Query Match             14.7%;  Score 158.5;  DB 22;  Length 2816;
  Best Local Similarity   24.5%;  Pred. No. 0.00036;
  Matches   52;  Conservative   42;  Mismatches   95;  Indels   23;  Gaps    6;

Qy      13 QEEENVLDAEFLKNELDSVKAQLSQKDREKRDSQAIIDTLRDTLEERNATVESLQNAL-- 70
           ||||     | |:  |   | |||:::::  :    :  |:   :   |    |:|
Db    2483 qeeerw--ceslektlsqtkrqlsereqqlveksgellalqkeadsmradfsllrnqflt 2540

Qy      71 --NKAEMLCSTLKKQMKFLEQRQDETKQAREEAHRLKCKMKTMEQIELLLQSQRSEVEEM 128
             |||   ::||: :|   ||    |   |:     |  | |  |||: |       :
Db    2541 erkkaekqvaslkealki--qrsqleknlleqkqensciqkematielvaqdnherarrl 2598

Qy     129 IRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKATGELADRLK------KDLVSSRSKLK 182
           ::::        |:      |||:  | |:  :   |::| ::      || :  |: ||
Db    2599 mkel-------nqmqyeytelkkqmanqkdlerrqmeisdamrtlksevkdei--rtslk 2649

Qy     183 TLNTELDQAKLELRSAQKDLQSADQEITSLRK 214
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Db    2650 nlnqflpelpadleailernenlegeleslke 2681


RESULT  27
AAG46982
ID   AAG46982 standard; Protein; 746 AA.
XX
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AC AAG46982;
XX
DT 18-OCT-2000 (first entry)
XX
DE Arabidopsis thaliana protein fragment SEQ ID NO: 59165.
XX
KW Protein identification; signal transduction pathway; metabolic pathway;
KW hybridisation assay; genetic mapping; gene expression control; promoter;
KW termination sequence.
XX
OS Arabidopsis thaliana.
XX
PN EP1033405-A2.
XX
PD 06-SEP-2000.
XX
PF 25-FEB-2000; 2000EP-0301439.
XX
PR 25-FEB-1999; 99US-0121825.
PR 05-MAR-1999; 99US-0123180.
PR 09-MAR-1999; 99US-0123548.
PR 23-MAR-1999; 99US-0125788.
PR 25-MAR-1999; 99US-0126264.
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PR 01-APR-1999; 99US-0127462.
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PR 16-APR-1999; 99US-0129845.
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PR 30-APR-1999; 99US-0132407.
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PR 06-MAY-1999; 99US-0132486.
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PR 16-AUG-1999; 99US-0149368.
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PR 25-AUG-1999; 99US-0150566.

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PR   27-AUG-1999;   99US-0151080.
PR   30-AUG-1999;   99US-0151303.
PR   31-AUG-1999;   99US-0151438.
PR   01-SEP-1999;   99US-0151930.
PR   07-SEP-1999;   99US-0152363.
PR   10-SEP-1999;   99US-0153070.
PR   13-SEP-1999;   99US-0153758.
PR   15-SEP-1999;   99US-0154018.
PR   16-SEP-1999;   99US-0154039.
PR   20-SEP-1999;   99US-0154779.
PR   22-SEP-1999;   99US-0155139.
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PR   05-OCT-1999;   99US-0157753.
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PR   07-OCT-1999;   99US-0158029.
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PR   14-OCT-1999;   99US-0159638.
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PR   22-OCT-1999;   99US-0160981.
PR   22-OCT-1999;   99US-0160989.
PR   25-OCT-1999;   99US-0161404.
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PR   26-OCT-1999;   99US-0161361.
PR   28-OCT-1999;   99US-0161920.
PR   28-OCT-1999;   99US-0161992.
PR   28-OCT-1999;   99US-0161993.
PR   29-OCT-1999;   99US-0162142.

  Query Match           14.7%;  Score 157.5;  DB 21;  Length 746;
  Best Local Similarity  23.6%;  Pred. No. 9.1e-05;
  Matches   62;  Conservative   50;  Mismatches   86;  Indels   65;  Gaps   10;

Qy      13 QEEENVLDAEF----------------LKNELDSVKAQ----LSQKDREKRDSQAIIDTL 52
           |:|:: ||| |                 :: ||:  : |    |   | |::  ::  : |
Db     131 qkekddldarfrevnetaerassqhssmqqelertrqqanealkamdaerqqlrsannkl 190

Qy      53 RDTLEE-------RNATVESLQNALNKAEMLCSTLKKQMKFLEQRQDETKQAREEAHRLK 105
           |||:||       :   :|:|| :|   : :   ||||:: :|:|:          |:
Db     191 rdtieelrgslqpkenkietlqqslldkdqiledlkkqlqaveerkqiavtelsakhqkn 250

Qy     106 CK----------------MKTMEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSL 149
            :                :|:  :::||  : |:: ||      |::|  :|     :|
Db     251 legleaqvvdalserdkaaetisslqvllaekeskiaem-eaaatgeaa--rlraaaetl 307

Qy     150 KKEYENLK---EARKATGELA-DRLKKDLVSSRSKLKTLNTELDQAKLE---------- 194
           | |  :||   |  | | | : | ||  |  : |    |  |:: ||:
Db     308 kgelahlksenekeketweascdalkskleiaesny--lqaeievakmrsqlgsemsmqt 365

Qy     195 --LRSAQKDLQSADQEITSLRKK 215
               | :   :|: | :||  |: :
Db     366 qilstkdaelkgareeinrlqse 388


RESULT  28
AAG46981
ID   AAG46981 standard; Protein; 788 AA.
XX
AC   AAG46981;
XX
DT   18-OCT-2000  (first entry)
XX
DE   Arabidopsis thaliana protein fragment SEQ ID NO: 59164.
XX
KW   Protein identification; signal transduction pathway; metabolic pathway;
KW   hybridisation assay; genetic mapping; gene expression control; promoter;
KW   termination sequence.
XX
OS   Arabidopsis thaliana.
XX
PN   EP1033405-A2.
XX
PD   06-SEP-2000.
XX
PF   25-FEB-2000; 2000EP-0301439.
XX
PR   25-FEB-1999;   99US-0121825.
PR   05-MAR-1999;   99US-0123180.
PR   09-MAR-1999;   99US-0123548.
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PR   29-MAR-1999;   99US-0126785.
PR   01-APR-1999;   99US-0127462.
PR   06-APR-1999;   99US-0128234.
PR   08-APR-1999;   99US-0128714.
PR   16-APR-1999;   99US-0129845.
PR   19-APR-1999;   99US-0130077.
PR   21-APR-1999;   99US-0130449.
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PR   23-APR-1999;   99US-0130891.
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PR   16-JUN-1999;   99US-0139453.
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PR 05-AUG-1999; 99US-0147260.
PR 06-AUG-1999; 99US-0147303.
PR 06-AUG-1999; 99US-0147416.
PR 09-AUG-1999; 99US-0147493.
PR 09-AUG-1999; 99US-0147935.
PR 10-AUG-1999; 99US-0148171.
PR 11-AUG-1999; 99US-0148319.
PR 12-AUG-1999; 99US-0148341.
PR 13-AUG-1999; 99US-0148565.
PR 13-AUG-1999; 99US-0148684.
PR 16-AUG-1999; 99US-0149368.
PR 17-AUG-1999; 99US-0149175.
PR 18-AUG-1999; 99US-0149426.
PR 20-AUG-1999; 99US-0149722.
PR 20-AUG-1999; 99US-0149723.
PR 20-AUG-1999; 99US-0149929.
PR 23-AUG-1999; 99US-0149902.
PR 23-AUG-1999; 99US-0149930.
PR 25-AUG-1999; 99US-0150566.
PR 26-AUG-1999; 99US-0150884.
PR 27-AUG-1999; 99US-0151065.
PR 27-AUG-1999; 99US-0151066.
PR 27-AUG-1999; 99US-0151080.
PR 30-AUG-1999; 99US-0151303.
PR 31-AUG-1999; 99US-0151438.
PR 01-SEP-1999; 99US-0151930.
PR 07-SEP-1999; 99US-0152363.
PR 10-SEP-1999; 99US-0153070.
PR 13-SEP-1999; 99US-0153758.
PR 15-SEP-1999; 99US-0154018.
PR 16-SEP-1999; 99US-0154039.
PR 20-SEP-1999; 99US-0154779.
PR 22-SEP-1999; 99US-0155139.
PR 23-SEP-1999; 99US-0155486.
PR 24-SEP-1999; 99US-0155659.
PR 28-SEP-1999; 99US-0156458.
PR 29-SEP-1999; 99US-0156596.
PR 04-OCT-1999; 99US-0157117.
PR 05-OCT-1999; 99US-0157753.
PR 06-OCT-1999; 99US-0157865.
PR 07-OCT-1999; 99US-0158029.
PR 08-OCT-1999; 99US-0158232.
PR 12-OCT-1999; 99US-0158369.
PR 13-OCT-1999; 99US-0159293.
PR 13-OCT-1999; 99US-0159294.
PR 13-OCT-1999; 99US-0159295.
PR 14-OCT-1999; 99US-0159329.
PR 14-OCT-1999; 99US-0159330.
PR 14-OCT-1999; 99US-0159331.
PR 14-OCT-1999; 99US-0159637.
PR 14-OCT-1999; 99US-0159638.
PR 18-OCT-1999; 99US-0159584.
PR 21-OCT-1999; 99US-0160741.
PR 21-OCT-1999; 99US-0160767.
PR 21-OCT-1999; 99US-0160768.
PR 21-OCT-1999; 99US-0160770.
PR 21-OCT-1999; 99US-0160814.
PR 21-OCT-1999; 99US-0160815.
PR 22-OCT-1999; 99US-0160980.
PR 22-OCT-1999; 99US-0160981.
PR 22-OCT-1999; 99US-0160989.
PR 25-OCT-1999; 99US-0161404.
PR 25-OCT-1999; 99US-0161405.
PR 25-OCT-1999; 99US-0161406.
PR 26-OCT-1999; 99US-0161359.
PR 26-OCT-1999; 99US-0161360.
PR 26-OCT-1999; 99US-0161361.
PR 28-OCT-1999; 99US-0161920.
PR 28-OCT-1999; 99US-0161992.
PR 28-OCT-1999; 99US-0161993.
PR 29-OCT-1999; 99US-0162142.

Query Match 14.7%; Score 157.5; DB 21; Length 788;
Best Local Similarity 23.6%; Pred. No. 9.7e-05;
Matches 62; Conservative 50; Mismatches 86; Indels 65; Gaps 10;

```
Qy      13 QEEENVLDAEF----------------LKNELDSVKAQ----LSQKDREKRDSQAIIDTL 52
           |:|:: ||| |                 :: ||:  : |    |   | |::  ::  : |
Db     173 qkekddldarfrevnetaerassqhssmqqelertrqqanealkamdaerqqlrsannkl 232

Qy      53 RDTLEE-------RNATVESLQNALNKAEMLCSTLKKQMKFLEQRQDETKQAREEAHRLK 105
           |||:||       :   :|:|| :|   : :   ||||:: :|:|:           |:
Db     233 rdtieelrgslqpkenkietlqqslldkdqiledlkkqlqaveerkqiavtelsakhqkn 292
```

```
Qy    106 CK----------------MKTMEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSL 149
          :                 :|:  :::||  : |:: ||      |::|  :|     :|
Db    293 legleaqvvdalserdkaaetisslqvllaekeskiaem-eaaatgeaa--rlraaaetl 349

Qy    150 KKEYENLK---EARKATGELA-DRLKKDLVSSRSKLKTLNTELDQAKLE---------- 194
          | |  :||   |  | | | : | ||  |  : |    |  |:: ||:
Db    350 kgelahlksenekeketweascdalkskleiaesny--lqaeievakmrsqlgsemsmqt 407

Qy    195 --LRSAQKDLQSADQEITSLRKK 215
            | :   :|: | :||  |: :
Db    408 qilstkdaelkgareeinrlqse 430
```

RESULT 29
AAB47278
ID AAB47278 standard; Protein; 2139 AA.
XX
AC AAB47278;
XX
DT 06-AUG-2001 (first entry)
XX
DE PN7771.
XX
KW Yeast two-hybrid system; MAPKAP-K3; bait protein; brain; primer; PCR;
KW polymerase chain reaction; amplify; tailed PCR product; pGBTQ;
KW J693; fusion protein; DNA binding domain; transcription factor;
KW Gal4; J692; transcription activation domain.
XX
OS Homo sapiens.
XX
PN WO200140794-A1.
XX
PD 07-JUN-2001.
XX
PF 01-DEC-2000; 2000WO-US32619.
XX
PR 02-DEC-1999; 99US-0168377.
PR 02-DEC-1999; 99US-0168379.
PR 25-FEB-2000; 2000US-0185056.
XX
PA (MYRI-) MYRIAD GENETICS INC.
XX
PI Heichman K, Cimbora DM, Bush A, Mauck K, Bartel PL;
XX
DR WPI; 2001-374951/39.
DR N-PSDB; AAC85836.
XX
PT Protein complexes useful for the diagnosis of, or predisposition to,
PT physiological disorders including non insulin dependent diabetes
PT mellitus and neurodegenerative disorders -
XX
PS Claim 41; Page 76-84; 97pp; English.
XX
CC The sequences given in AAB47277-79 show proteins which were identified
CC using a yeast two-hybrid system described in the specification. For this
CC sequence, amino acids encoded by nucleotides 433-1003 of MAPKAP-K3 were
CC used as bait. cDNA's encoding the bait protein were generated from brain
CC cDNA. Gene specific primers were synthesised with appropriate tails
CC added to their 5' ends to allow recombination into the vector pGBTQ. The
CC primer tail sequences are given in AAC85838-39. The tailed PCR product
CC was then introduced into pGBTQ, and the new construct was directly
CC selected in the yeast J693 for its ability to drive tryptophan
CC synthesis. In these yeast cells, the bait is produced as a C-terminal
CC fusion protein with the DNA binding domain of the transcription factor
CC Gal4 (residues 1-147). A total human brain cDNA library was transformed
CC into yeast strain J692 and selected for the ability to drive leucine
CC synthesis. In these yeast cells, each cDNA expressed as a fusion
CC protein with the transcription activation domain of Gal4 (residues
CC 768-881) and a 9 amino acid hemagglutinin tag. J693 cells expressing
CC the bait were then mated with J692 cells expressing proteins from the
CC brain library. The resulting diploid cells expressing proteins
CC interacting with the bait protein were selected for their ability to
CC synthesize tryptophan, leucine, histidine and beta-galactosidase. The
CC identity of bait cDNA was confirmed and the cDNA insert from the brain
CC library plasmid was identified using BLAST program.
XX
SQ Sequence 2139 AA;

Query Match 14.7%; Score 157.5; DB 22; Length 2139;
Best Local Similarity 22.3%; Pred. No. 0.00032;
Matches 54; Conservative 58; Mismatches 81; Indels 49; Gaps 7;

```
Qy     15 EENVLDAEFLKNELDSVKAQLSQKDREKRD-----SQAIIDTL--------RDTLEERNA 61
          :: : : :    :||    :||||: : ::     :| : : |             ||||
Db   1582 kkqiselkiknqqldlentelsqknsqnqeklqelnqrltemlcqkekepgnsaleereq 1641

Qy     62 TVESLQNALNKAEMLCSTLKKQMKF-LEQRQDETKQAREEAHRLKCKMKTMEQI------ 114
            :|:  | : ::  |||   ::  | : : :|   ::| | || ::: |:|:
Db   1642 ekfnlkeelerckvqsstlvssleaelsevkiqthivqqenhllkdelekmkqlhrcpdl 1701

Qy    115 -------------ELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEAR 160
                        | ||: : :  ||:       | |::||   : |:    :|: :
Db   1702 sdfqqkissvlsynekllkekealseel-------nscvdklakssl-lehriatmkqeq 1753

Qy    161 KATGELADRLKKDLVSSRSKLKTL-------NTELDQAKLELRSAQKDLQSADQEITSLR 213
          |:    :  ||  ||:|: |:: |       | :: : | :||  |:: ::  ||: ||
Db   1754 kswehqsaslksqlvasqekvqnledtvqnvnlqmsrmksdlrvtqqekealkqevmslh 1813

Qy    214 KK 215
          |:
Db   1814 kq 1815
```

RESULT 30
AAM79969
ID AAM79969 standard; Protein; 533 AA.
XX
AC AAM79969;
XX
DT 06-NOV-2001 (first entry)
XX
DE Human protein SEQ ID NO 3615.
XX
KW Human; cytokine; cell proliferation; cell differentiation; gene therapy;
KW vaccine; peptide therapy; stem cell growth factor; haematopoiesis;
KW tissue growth factor; immunomodulatory; cancer; leukaemia;
KW nervous system disorder; arthritis; inflammation.
XX
OS Homo sapiens.
XX
PN WO200157190-A2.
XX
PD 09-AUG-2001.
XX
PF 05-FEB-2001; 2001WO-US04098.
XX
PR 03-FEB-2000; 2000US-0496914.
PR 27-APR-2000; 2000US-0560875.
PR 20-JUN-2000; 2000US-0598075.
PR 19-JUL-2000; 2000US-0620325.
PR 01-SEP-2000; 2000US-0654936.
PR 15-SEP-2000; 2000US-0663561.
PR 20-OCT-2000; 2000US-0693325.
PR 30-NOV-2000; 2000US-0728422.
XX
PA (HYSE-) HYSEQ INC.
XX
PI Tang YT, Liu C, Drmanac RT, Asundi V, Zhou P, Xu C, Cao Y, Ma Y;
PI Zhao QA, Wang D, Wang J, Zhang J, Ren F, Chen R, Wang ZW;
PI Xue AJ, Yang Y, Wejhrman T, Goodrich R;
XX
DR WPI; 2001-476283/51.
DR N-PSDB; AAK53102.
XX

```
PT   Nucleic acids encoding polypeptides with cytokine-like activities,
PT   useful in diagnosis and gene therapy -
XX
PS   Claim 20; Page 397; 6221pp; English.
XX
CC   The invention relates to polynucleotides (AAK51456-AAK53435) and the
CC   encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to
CC   cytokine, cell proliferation or cell differentiation or which may induce
CC   production of other cytokines in other cell populations. The
CC   polynucleotides and polypeptides are useful in gene therapy, vaccines or
CC   peptide therapy. The polypeptides have various cytokine-like activities,
CC   e.g. stem cell growth factor activity, haematopoiesis regulating
CC   activity, tissue growth factor activity, immunomodulatory activity and
CC   activin/inhibin activity and may be useful in the diagnosis and/or
CC   treatment of cancer, leukaemia, nervous system disorders, arthritis and
CC   inflammation.
CC   Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666
CC   (AAM80020) are omitted as the relevant pages from the sequence listing
CC   were missing at the time of publication.
XX
SQ   Sequence   533 AA;


  Query Match             14.5%;  Score 155.5;  DB 22;  Length 533;
  Best Local Similarity   23.3%;  Pred. No. 9e-05;
  Matches   67;  Conservative   46;  Mismatches   95;  Indels   79;  Gaps    9;

Qy       1 KTIINKLFFDLAQEEENVLDAEFLKNELDSVKAQLSQKD-------------REKRDSQ 46
           |  |  |   |  :|:    |  |: |:|::: :| :|:               ||
Db      13 kqhievlkesltakeqr---aailqtevdalrlrleeketmlnkktkqiqdmaeekgtqa 69

Qy      47 AIIDTLRDTLE--ERNATV-----ESLQNALNKAEMLCSTLKKQMKFL------------ 87
             |  |:| |:  ||   |     |:||  |   |   |:||:::| |
Db      70 geihdlkdmldvkerkvnvlqkkienlqeqlrdkekqmsslkervkslqadttntdtalt 129

Qy      88 -----------------EQRQDETKQAREEAHRLKCKMKTMEQIELLLQSQRSEVEEMIR 130
                           |||  : :: :||    |  :| :::   |||   || |  :
Db     130 tleealaekertierlkeqrdrderekqeeidnykkdlkdlkekvsllqgdlsekeasll 189

Qy     131 DMGVGQS-----------------AVEQLAVYCV----SLKKEYENLKEARKATGELAD 168
           |:    |                  |:||    |:     ||| :|   ||| |: |::|
Db     190 dlkehasslassglkkdsrlktleialeqkkeeclkmesqlkkaheaalear-aspemsd 248

Qy     169 R---LKKDLVSSRSKLKTLNTELDQAKLELRSAQKDLQSADQEITSL 212
           |   |::::   : :      |:|:    |:  : :    |::|  |
Db     249 riqhlereitrykdesskaqaevdrlleilkeveneknddkdkkiael 295


RESULT  31
AAY31646
ID   AAY31646 standard; Protein; 962 AA.
XX
AC   AAY31646;
XX
DT   02-NOV-1999  (first entry)
XX
DE   Human transport-associated protein-8 (TRANP-8).
XX
KW   Transport-associated protein; TRANP; nuclear pore; nuclear transport;
KW   vesicle trafficking; cancer; cystic fibrosis; multidrug resistance;
KW   hypercholesterolaemia; diagnosis; treatment.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   18
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   34
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   74
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   81
FT                   /note= "O-phosphorylated by tyrosine kinase"
FT   Modified-site   91
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   101
FT                   /note= "N-glycosylated"
FT   Modified-site   123
FT                   /note= "N-glycosylated"
FT   Modified-site   129
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   243
FT                   /note= "N-glycosylated"
FT   Modified-site   336
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   410
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   451
FT                   /note= "N-glycosylated"
FT   Modified-site   453
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   585
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   631
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   632
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   717
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   754
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   758
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   780
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   844
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   882
FT                   /note= "N-glycosylated"
FT   Modified-site   890
FT                   /note= "O-phosphorylated by casein kinase II"
FT   Modified-site   902
FT                   /note= "O-phosphorylated by casein kinase II"
XX
PN   WO9941373-A2.
XX
PD   19-AUG-1999.
XX
PF   05-FEB-1999;   99WO-US02527.
XX
PR   11-FEB-1998;   98US-0021764.
XX
PA   (INCY-) INCYTE PHARM INC.
XX
PI   Au-Young J,  Bandman O,  Baughn MR,  Corley NC,  Guegler KJ;
PI   Hillman JL,  Lal P,  Yue H;
XX
DR   WPI; 1999-508646/42.
DR   N-PSDB; AAZ11738.
XX
PT   Human TRANP coding sequences, used to treat transport disorders and
PT   cancer
XX
PS   Claim 1; Page 74-77; 87pp; English.
XX
CC   This sequence represents human transport-associated protein-8 (TRANP-8).
CC   The DNA sequence was first identified in a human colon tissue
CC   cDNA library. The full-length cDNA was derived from a series of
CC   overlapping and/or extended cDNA sequences and is a consensus.
CC   TRANP-1 to 9 (AAY31639-Y31647) are a novel group of proteins with
CC   chemical and structural homology that are involved in molecular
CC   transport. Various disorders are associated with defects in the transport
CC   of molecules, either intracellularly or to the extracellular
CC   environment. Examples of such disorders include cystic fibrosis,
CC   multidrug resistance, hypercholesterolaemia and certain forms of diabetes
CC   mellitus. Defective nuclear transport may play a role in cancer. For
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CC   example, the BRCA1 protein, associated with familial breast cancer, is
CC   normally imported into the nucleus via nuclear pore complexes, but is
CC   aberrantly located in the cytoplasm in breast cancer cells. In other
CC   cancers, cells can secrete excessive amounts of hormones e.g, cancers of
CC   the adrenal medulla can secrete excessive amounts of adrenaline and
CC   noradrenaline, leading to hypertension. TRANP is expressed in cancer
CC   cells, and transport disorders result from either excessive or
CC   insufficient molecular transport. Anti-TRANP antibodies and nucleic acids
CC   encoding TRANP can be used as diagnostic tools for such disorders. TRANP
CC   antagonists can be used to treat or prevent a cancer associated with
CC   increased TRANP expression. Anti-TRANP antibodies can be used directly
CC   as an antagonist or as a targetting mechanism for drugs. Alternatively,
CC   a a TRANP antisense nucleotide can be used to treat cancers. A TRANP
CC   agonist or expression vector may be used to treat a disorder caused by
CC   reduced transport of biologically active molecules.
XX
SQ   Sequence   962 AA;


  Query Match             14.4%;  Score 155;  DB 20;  Length 962;
  Best Local Similarity   19.8%;  Pred. No. 0.0002;
  Matches   64;  Conservative   57;  Mismatches   93;  Indels  110;  Gaps    6;

Qy       3 IINKLFFDLAQEEENVLDAEFLKNELDSVKAQLSQKDREKRDSQAIIDTLRDTLEERNAT 62
Db     608 ifdheftklvkelegvitkaiyksseedkkeeevkktleqhdn--ivthyknmireqdlq 665

Qy      63 VESLQNALN----KAEMLCSTLKKQMKFLEQRQDETKQAR---------------------- 98
Db     666 leelrqqvstlkcqneqlqtavtqqvsqiqqhkdqynllkiqlgkdnqhqgsysegaqmn 725

Qy      99 ----EEAHRLKCKMKTMEQIELLLQSQRSEVEEMIRDMGVGQSA----------------- 138
Db     726 giqpeeigrlreeieelkrnqellqsqltekdsmienmkssqtsgtneqssaivsardse 785

Qy     139 -VEQLAVYCVSLK------------------------------------------------ 150
Db     786 qvaelkqelatlksqlnsqsveitklqtekqellqkteafaksvevqgetetiiatkttd 845

Qy     151 ---------KEYENLKEARKATGELADRLKKDLVSSRSKLKTLNTELDQAKLELRSAQKD 201
Db     846 vegrlsallqetkelkneikalseertaikeqldssnstiailqtekdkleleitdskke 905

Qy     202 -------LQSADQEITSLRKKSDD 218
Db     906 qddllvlladqdqkilslknklkd 929


RESULT  32
ABB71125
ID   ABB71125 standard; Protein; 2067 AA.
XX
AC   ABB71125;
XX
DT   26-MAR-2002  (first entry)
XX
DE   Drosophila melanogaster polypeptide SEQ ID NO 40167.
XX
KW   Drosophila; developmental biology; cell signalling; insecticide;
KW   pharmaceutical.
XX
OS   Drosophila melanogaster.
XX
PN   WO200171042-A2.
XX
PD   27-SEP-2001.
XX
PF   23-MAR-2001; 2001WO-US09231.
XX
PR   23-MAR-2000; 2000US-191637P.
PR   11-JUL-2000; 2000US-0614150.
XX
PA   (PEKE ) PE CORP NY.
XX
PI   Venter JC,  Adams M,  Li PWD,  Myers EW;
XX
DR   WPI; 2001-656860/75.
DR   N-PSDB; ABL15228.
XX
PT   New isolated nucleic acid detection reagent for detecting 1000 or more
PT   genes from Drosophila and for elucidating cell signalling and cell-cell
PT   interactions -
XX
PS   Disclosure; SEQ ID NO 40167; 21pp + Sequence Listing; English.
XX
CC   The invention relates to an isolated nucleic acid detection reagent
CC   capable of detecting 1000 or more genes from Drosophila. The invention is
CC   useful in developmental biology and in elucidating cell signalling and
CC   cell-cell interactions in higher eukaryotes for the development of
CC   insecticides, therapeutics and pharmaceutical drugs. The invention
CC   discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA
CC   sequences (ABL01840-ABL16175) and the encoded proteins
CC   (ABB57737-ABB72072).
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence   2067 AA;


  Query Match             14.4%;  Score 154.5;  DB 22;  Length 2067;
  Best Local Similarity   22.8%;  Pred. No. 0.00053;
  Matches   59;  Conservative   56;  Mismatches   91;  Indels   53;  Gaps    9;

Qy      10 DLAQEEENVLD--AEFLKNELDSVKAQLSQKDREKRDSQAIIDTLRDTLEERNATVESLQ 67
Db    1769 ddareqlgiserranalqneleesrtlleqadrgrrqaeqeladaheqlnevsaqnasis 1828

Qy      68 NALNKAEMLCSTLKKQMKFL----EQRQDETKQAREEAHRLKCKMKTMEQIELLLQSQRS 123
Db    1829 aakrkleselqtlhsdldellneaknseekakkamvdaarladelraeqdhaqtqeklrk 1888

Qy     124 EVEEMIRDMGV-----------GQSAVEQLAVYCVSLKKEYE----------NLKEAR 160
Db    1889 aleqqikelqvrldeaeanalkggkkaiqkleqrvreleneldgeqrrhadaqknlrkse 1948

Qy     161 KATGELA-----DRLK----KDLVSS-RSKLKTLNTELDQAK-------LELRSAQKDLQ 203
Db    1949 rrvkelsfqseedrknhermqdlvdklqqkiktykrqieeaeeiaalnlakfrkaqqele 2008

Qy     204 S-------ADQEITSLRKK 215
Db    2009 eaeeradlaeqaiskfrak 2027


RESULT  33
AAR92750
ID   AAR92750 standard; Protein; 896 AA.
XX
AC   AAR92750;
XX
DT   04-JUN-1996  (first entry)
XX
DE   Human EGF receptor substrate, eps15.
XX
KW   eps15; epidermal growth factor; EGF; receptor; substrate; TK;
KW   tyrosine kinase; mitogenic signalling pathway; neoplasia; tumour;
KW   diagnosis; therapy.
XX
OS   Homo sapiens.
XX
PN   US5487979-A.
XX
PD   30-JAN-1996.
XX
PF   25-AUG-1992;   92US-0935311.
```

```
XX
PR   22-JUL-1993;   93US-0095737.
PR   25-AUG-1992;   92US-0935311.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Difiore PP,  Fazioli F;
XX
DR   WPI; 1996-105227/11.
DR   N-PSDB; AAT16483.
XX
PT   Poly-nucleotide(s) encoding eps15 - used to develop prods. for the
PT   therapy, diagnosis and prognosis of neoplasia and related disorders.
XX
PS   Claim 1; Column 25-30; 23pp; English.
XX
CC   AAR92750 is the human epidermal growth factor (EGF) receptor (EGFR)
CC   substrate, eps15 (EGFR pathway substrate 15). The EGFR is not thought
CC   to interact with known second messenger systems efficiently and for
CC   this reason there is a need to ascertain the mechanism by which the
CC   EGFR functions in mitogenesis. eps15 has been isolated and found to
CC   be tyrosine phosphorylated by the EGFR tyrosine kinase and hence
CC   involved in the regulation of mitogenic signals. eps15 polynucleotides
CC   can be used to develop prods. for the therapy, diagnosis and prognosis
CC   of neoplasia and other disorders connected with abnormal mitogenic
CC   signalling pathways. eps15 also enhances cell response to mitogenic
CC   factors.
XX
SQ   Sequence   896 AA;


  Query Match             14.3%;  Score 154;  DB 17;  Length 896;
  Best Local Similarity   22.6%;  Pred. No. 0.00022;
  Matches   53;  Conservative   42;  Mismatches   60;  Indels   80;  Gaps    7;

Qy      10 DLAQEEENVLD----AEFLK-NELDSVKAQLSQKDREKRDSQAIIDTLRDTLEERNATVE 64
           | |  ::|::     |:|    |||::  ::    ||| : :  :    ||:::| : |:
Db     312 draslqkniigsspvadfsaikeldtlnneivdlqreknnveqdlkekedtikqrtsevq 371

Qy      65 SLQNALNKAEMLCSTLKKQMKFLEQRQDETKQAREEAHRLKCKMKTMEQIELLLQSQRSE 124
            ||: :                   ||::   |                     ||:|: :
Db     372 dlqdev-----------------qrentnlqk-------------------lqaqkqq 393

Qy     125 VEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKATGE---LADRLKKDLVSSRSKL 181
           |:|:: ::   :: :|             | ||| ||   |   |   || :| |  |::
Db     394 vqelldeldeqkaqle------------eqlkevrkkcaeeaqlisslkaeltsqesqi 440

Qy     182 KTLNTELDQA--------------------KLELRSAQKDLQSADQEITSLRKK 215
            |   || :|                    | :|   |: || : |||:|:: |
Db     441 styeeelakareelsrlqqetaeleesvesgkaqleplqqhlqdsqqeissmqmk 495


RESULT  34
AAW47117
ID   AAW47117 standard; Protein; 896 AA.
XX
AC   AAW47117;
XX
DT   20-MAY-1998  (first entry)
XX
DE   Human eps15 protein.
XX
KW   Epidermal growth factor receptor; EGFR; tyrosine kinase; eps15;
KW   human; murine; mitogenic response.
XX
OS   Homo sapiens.
XX
PN   US5717067-A.
XX
PD   10-FEB-1998.
XX
PF   07-JUN-1995;   95US-0480145.
XX
PR   22-JUL-1993;   93US-0095737.
PR   25-AUG-1992;   92US-0935311.
PR   07-JUN-1995;   95US-0480145.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Difiore PP,  Fazioli F;
XX
DR   WPI; 1998-158371/14.
DR   N-PSDB; AAV13998.
XX
PT   Human and murine eps15 proteins - useful for enhancing mitogenic
PT   response and for determining tyrosine kinase activity
XX
PS   Claim 2; Columns 17-24; 23pp; English.
XX
CC   This is a human eps15 protein. The human and murine eps15 polypeptides
CC   or their fragments and conservative variants have the same biological
CC   activity as substrates in the pathway of epidermal growth factor receptor
CC   (EGFR) kinase. This is evidenced by tyrosine phosphorylation of the
CC   polypeptides or mitogen stimulation by the polypeptides upon activation
CC   of the EGFR kinase. The eps15 polypeptides are used for enhancing the
CC   response of cells to mitogenic factors and for determining the tyrosine
CC   kinase activity of EGFR and other tyrosine kinase receptors in biological
CC   samples.
XX
SQ   Sequence   896 AA;


  Query Match             14.3%;  Score 154;  DB 19;  Length 896;
  Best Local Similarity   22.6%;  Pred. No. 0.00022;
  Matches   53;  Conservative   42;  Mismatches   60;  Indels   80;  Gaps    7;

Qy      10 DLAQEEENVLD----AEFLK-NELDSVKAQLSQKDREKRDSQAIIDTLRDTLEERNATVE 64
           | |  ::|::     |:|    |||::  ::    ||| : :  :    ||:::| : |:
Db     312 draslqkniigsspvadfsaikeldtlnneivdlqreknnveqdlkekedtikqrtsevq 371

Qy      65 SLQNALNKAEMLCSTLKKQMKFLEQRQDETKQAREEAHRLKCKMKTMEQIELLLQSQRSE 124
            ||: :                   ||::   |                     ||:|: :
Db     372 dlqdev-----------------qrentnlqk-------------------lqaqkqq 393

Qy     125 VEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKATGE---LADRLKKDLVSSRSKL 181
           |:|:: ::   :: :|             | ||| ||   |   |   || :| |  |::
Db     394 vqelldeldeqkaqle------------eqlkevrkkcaeeaqlisslkaeltsqesqi 440

Qy     182 KTLNTELDQA--------------------KLELRSAQKDLQSADQEITSLRKK 215
            |   || :|                    | :|   |: || : |||:|:: |
Db     441 styeeelakareelsrlqqetaeleesvesgkaqleplqqhlqdsqqeissmqmk 495


RESULT  35
AAW94405
ID   AAW94405 standard; Protein; 896 AA.
XX
AC   AAW94405;
XX
DT   19-APR-1999  (first entry)
XX
DE   Human eps15 protein.
XX
KW   Human; eps15; epidermal growth factor receptor; EGFR; triple helix;
KW   tyrosine kinase receptor; mitogenic signal transduction; detection;
KW   malignant tissue.
XX
OS   Homo sapiens.
XX
PN   US5872219-A.
XX
PD   16-FEB-1999.
XX
PF   07-JUN-1995;   95US-0477389.
XX
PR   22-JUL-1993;   93US-0095737.
```

```
PR   25-AUG-1992;   92US-0935311.
PR   07-JUN-1995;   95US-0477389.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   DiFiore PP,  Fazioli F;
XX
DR   WPI; 1999-166718/14.
DR   N-PSDB; AAX04191.
XX
PT   New anti-eps15 antibodies - used for detection of eps15, tyrosine
PT   kinase receptor kinase activity and altered mitogenic signal
PT   transduction
XX
PS   Claim 1; Column 25-30; 26pp; English.
XX
CC   The present invention describes antibodies which specifically bind to
CC   human and murine eps (epidermal growth factor receptor pathway
CC   substrate) 15. Also described are purified antibodies that specifically
CC   bind to eps15 serving as a substrate for tyrosine phosphorylation
CC   following epidermal growth factor receptor (EGFR) activation, where
CC   the amino acids of eps15 hybridise under low stringency conditions to
CC   the protein-encoding domain of human or murine eps15 polynucleotides.
CC   The antibodies can be used to assay eps15 in samples. They can also be
CC   used to determine tyrosine kinase receptor (TKR) activity in samples
CC   and to detect altered mitogenic signal transduction, particularly in
CC   malignant tissues. The present sequence represents human eps15.
XX
SQ   Sequence   896 AA;


  Query Match             14.3%;  Score 154;  DB 20;  Length 896;
  Best Local Similarity   22.6%;  Pred. No. 0.00022;
  Matches   53;  Conservative   42;  Mismatches   60;  Indels   80;  Gaps    7;

Qy      10 DLAQEEENVLD----AEFLK-NELDSVKAQLSQKDREKRDSQAIIDTLRDTLEERNATVE 64
           | |  ::|::     |:|    |||::  ::    ||| : :  :    ||:::| : |:
Db     312 draslqkniigsspvadfsaikeldtlnneivdlqreknnveqdlkekedtikqrtsevq 371

Qy      65 SLQNALNKAEMLCSTLKKQMKFLEQRQDETKQAREEAHRLKCKMKTMEQIELLLQSQRSE 124
           ||: :                  |::   |                    ||:|: :
Db     372 dlqdev-----------------qrentnlqk-------------------lqaqkqq 393

Qy     125 VEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEARKATGE---LADRLKKDLVSSRSKL 181
           |:|:: ::   :: :|             | ||| ||   |   |   || :| |  |::
Db     394 vqelldeldeqkaqle------------eqlkevrkkcaeeaqlisslkaeltsqesqi 440

Qy     182 KTLNTELDQA--------------------KLELRSAQKDLQSADQEITSLRKK 215
             |   || :|                    | :|   |: || : |||:|:: |
Db     441 styeeelakareelsrlqqetaeleesvesgkaqleplqqhlqdsqqeissmqmk 495


RESULT  36
AAM39213
ID   AAM39213 standard; Protein; 1453 AA.
XX
AC   AAM39213;
XX
DT   22-OCT-2001  (first entry)
XX
DE   Human polypeptide SEQ ID NO 2358.
XX
KW   Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer;
KW   peripheral nervous system; neuropathy; central nervous system; CNS;
KW   Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic;
KW   amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
KW   chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
KW   leukaemia.
XX
OS   Homo sapiens.
XX
PN   WO200153312-A1.
XX
PD   26-JUL-2001.
XX
PF   26-DEC-2000; 2000WO-US34263.
XX
PR   21-JAN-2000; 2000US-0488725.
PR   25-APR-2000; 2000US-0552317.
PR   09-JUL-2000; 2000US-0598042.
PR   19-JUL-2000; 2000US-0620312.
PR   03-AUG-2000; 2000US-0653450.
PR   14-SEP-2000; 2000US-0662191.
PR   19-OCT-2000; 2000US-0693036.
PR   29-NOV-2000; 2000US-0727344.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Asundi V,  Chen R,  Ma Y,  Qian XB,  Ren F,  Wang D;
PI   Wang J,  Wang Z,  Wehrman T,  Xu C,  Xue AJ,  Yang Y,  Zhang J;
PI   Zhao QA,  Zhou P,  Goodrich R,  Drmanac RT;
XX
DR   WPI; 2001-442253/47.
DR   N-PSDB; AAI58369.
XX
PT   Novel nucleic acids and polypeptides, useful for treating disorders
PT   such as central nervous system injuries -
XX
PS   Example 4; SEQ ID NO 2358; 10078pp; English.
XX
CC   The invention relates to human nucleic acids (AAI57798-AAI61369) and
CC   the encoded polypeptides (AAM38642-AAM42213) with nootropic,
CC   immunosuppressant and cytostatic activity. The polynucleotides are useful
CC   in gene therapy. A composition containing a polypeptide or polynucleotide
CC   of the invention may be used to treat diseases of the peripheral nervous
CC   system, such as peripheral nervous injuries, peripheral neuropathy and
CC   localised neuropathies and central nervous system diseases, such as
CC   Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic
CC   lateral sclerosis, and Shy-Drager Syndrome. Other uses include the
CC   utilisation of the activities such as: Immune system suppression,
CC   Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic
CC   and thrombolytic activity, cancer diagnosis and therapy, drug screening,
CC   assays for receptor activity, arthritis and inflammation, leukaemias and
CC   C.N.S disorders.
CC   Note: The sequence data for this patent did not form part of the printed
CC   specification.
XX
SQ   Sequence   1453 AA;


  Query Match             14.3%;  Score 154;  DB 22;  Length 1453;
  Best Local Similarity   21.0%;  Pred. No. 0.00039;
  Matches   64;  Conservative   58;  Mismatches   93;  Indels   90;  Gaps   10;

Qy       4 INKLFFDLAQEEENV----------------------LDAEF--LKNELDSVKAQLSQK 38
           |::|   ||::|| :                      | |:   |: : :| ||  ::
Db    1078 idelklqlakkeeelqgalargddetlhknnalkvvrelqaqiaelqedfesekasrnka 1137

Qy      39 DREKRDSQAIIDTLRDTLEERNATVESLQNALNKAEMLCSTLKK----------QMKFL 87
           :::|||    :: |:  ||:   |  : |    | |   : |||          |:: :
Db    1138 ekqkrdlseelealkteledtldttaaqqelrtkreqevaelkkaleeetknheaqiqdm 1197

Qy      88 EQRQ----DETKQAREEAHRLK-----------------CKMKTMEQIELLLQSQR--- 122
            ||      :|  :  |:| | |                 |::| ::|::   : :|
Db    1198 rqrhataleelseqleqakrfkanleknkqgletdnkelacevkvlqqvkaesehkrkkl 1257

Qy     123 -SEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYEN----LKEARKA--------------- 162
            ::|:|:   :  |     :||     |: | :|    |:|| |
Db    1258 daqvqelhakvsegdrlrvelaekasklqneldnvstlleeaekkgikfakdaaslesql 1317

Qy     163 --TGELADRLKKDLVSSRSKLKTLNTE---LDQAKLELRSAQKDLQ----SADQEITSLR 213
             | ||     :  ::  |::: |  |   | : : |   |:|:|:    :   ::   :
Db    1318 qdtqellqeetrqklnlssrirqleeeknslqeqqeeeeearknlekqvlalqsqladtk 1377

Qy     214 KKSDD 218
           || ||
```

```
Db   1378 kkvdd 1382


RESULT 37
AAM39214
ID   AAM39214 standard; Protein; 1469 AA.
XX
AC   AAM39214;
XX
DT   22-OCT-2001  (first entry)
XX
DE   Human polypeptide SEQ ID NO 2359.
XX
KW   Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer;
KW   peripheral nervous system; neuropathy; central nervous system; CNS;
KW   Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic;
KW   amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
KW   chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
KW   leukaemia.
XX
OS   Homo sapiens.
XX
PN   WO200153312-A1.
XX
PD   26-JUL-2001.
XX
PF   26-DEC-2000; 2000WO-US34263.
XX
PR   21-JAN-2000; 2000US-0488725.
PR   25-APR-2000; 2000US-0552317.
PR   09-JUL-2000; 2000US-0598042.
PR   19-JUL-2000; 2000US-0620312.
PR   03-AUG-2000; 2000US-0653450.
PR   14-SEP-2000; 2000US-0662191.
PR   19-OCT-2000; 2000US-0693036.
PR   29-NOV-2000; 2000US-0727344.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Asundi V,  Chen R,  Ma Y,  Qian XB,  Ren F,  Wang D;
PI   Wang J,  Wang Z,  Wehrman T,  Xu C,  Xue AJ,  Yang Y,  Zhang J;
PI   Zhao QA,  Zhou P,  Goodrich R,  Drmanac RT;
XX
DR   WPI; 2001-442253/47.
DR   N-PSDB; AAI58370.
XX
PT   Novel nucleic acids and polypeptides, useful for treating disorders
PT   such as central nervous system injuries -
XX
PS   Example 4; SEQ ID NO 2359; 10078pp; English.
XX
CC   The invention relates to human nucleic acids (AAI57798-AAI61369) and
CC   the encoded polypeptides (AAM38642-AAM42213) with nootropic,
CC   immunosuppressant and cytostatic activity. The polynucleotides are useful
CC   in gene therapy. A composition containing a polypeptide or polynucleotide
CC   of the invention may be used to treat diseases of the peripheral nervous
CC   system, such as peripheral nervous injuries, peripheral neuropathy and
CC   localised neuropathies and central nervous system diseases, such as
CC   Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic
CC   lateral sclerosis, and Shy-Drager Syndrome. Other uses include the
CC   utilisation of the activities such as: Immune system suppression,
CC   Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic
CC   and thrombolytic activity, cancer diagnosis and therapy, drug screening,
CC   assays for receptor activity, arthritis and inflammation, leukaemias and
CC   C.N.S disorders.
CC   Note: The sequence data for this patent did not form part of the printed
CC   specification.
XX
SQ   Sequence   1469 AA;


  Query Match           14.3%;  Score 154;  DB 22;  Length 1469;
  Best Local Similarity 21.0%;  Pred. No. 0.00039;
  Matches   64;  Conservative   58;  Mismatches   93;  Indels   90;  Gaps   10;

Qy       4 INKLFFDLAQEEENV----------------------LDAEF--LKNELDSVKAQLSQK 38
           |::|   ||::|| :                      | |:   |: : :| ||  ::
Db    1094 idelklqlakkeeelqgalargddetlhknnalkvvrelqaqiaelqedfesekasrnka 1153

Qy      39 DREKRDSQAIIDTLRDTLEERNATVESLQNALNKAEMLCSTLKK----------QMKFL 87
           :::|||    :: |:  ||:   |  : |    | |   : |||          |:: :
Db    1154 ekqkrdlseelealkteledtldttaaqqelrtkreqevaelkkaleeetknheaqiqdm 1213

Qy      88 EQRQ----DETKQAREEAHRLK-----------------CKMKTMEQIELLLQSQR--- 122
            ||     :|  :  |:| | |                  |::| ::|::   : :|
Db    1214 rqrhataleelseqleqakrfkanleknqqgletdnkelacevkvlqqvkaesehkrkkl 1273

Qy     123 -SEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYEN----LKEARKA-------------- 162
            ::|:|:   :  |     :||     |: | :|    |:|| |
Db    1274 daqvqelhakvsegdrlrvelaekasklqneldnvstlleeaekkgikfakdaaslesql 1333

Qy     163 --TGELADRLKKDLVSSRSKLKTLNTE---LDQAKLELRSAQKDLQ----SADQEITSLR 213
             | ||     :  ::  |::: |  |    | : : |   |:|:|:    :   ::   :
Db    1334 qdtqellqeetrqklnlssrirqleeeknslqeqqeeeeearknlekqvlalqsqladtk 1393

Qy     214 KKSDD 218
           || ||
Db    1394 kkvdd 1398


RESULT 38
AAM40999
ID   AAM40999 standard; Protein; 1988 AA.
XX
AC   AAM40999;
XX
DT   22-OCT-2001  (first entry)
XX
DE   Human polypeptide SEQ ID NO 5930.
XX
KW   Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer;
KW   peripheral nervous system; neuropathy; central nervous system; CNS;
KW   Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic;
KW   amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
KW   chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
KW   leukaemia.
XX
OS   Homo sapiens.
XX
PN   WO200153312-A1.
XX
PD   26-JUL-2001.
XX
PF   26-DEC-2000; 2000WO-US34263.
XX
PR   21-JAN-2000; 2000US-0488725.
PR   25-APR-2000; 2000US-0552317.
PR   09-JUL-2000; 2000US-0598042.
PR   19-JUL-2000; 2000US-0620312.
PR   03-AUG-2000; 2000US-0653450.
PR   14-SEP-2000; 2000US-0662191.
PR   19-OCT-2000; 2000US-0693036.
PR   29-NOV-2000; 2000US-0727344.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Asundi V,  Chen R,  Ma Y,  Qian XB,  Ren F,  Wang D;
PI   Wang J,  Wang Z,  Wehrman T,  Xu C,  Xue AJ,  Yang Y,  Zhang J;
PI   Zhao QA,  Zhou P,  Goodrich R,  Drmanac RT;
XX
DR   WPI; 2001-442253/47.
DR   N-PSDB; AAI60155.
XX
PT   Novel nucleic acids and polypeptides, useful for treating disorders
PT   such as central nervous system injuries -
XX
```

```
PS   Example 2; SEQ ID NO 5930; 10078pp; English.
XX
CC   The invention relates to human nucleic acids (AAI57798-AAI61369) and
CC   the encoded polypeptides (AAM38642-AAM42213) with nootropic,
CC   immunosuppressant and cytostatic activity. The polynucleotides are useful
CC   in gene therapy. A composition containing a polypeptide or polynucleotide
CC   of the invention may be used to treat diseases of the peripheral nervous
CC   system, such as peripheral nervous injuries, peripheral neuropathy and
CC   localised neuropathies and central nervous system diseases, such as
CC   Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic
CC   lateral sclerosis, and Shy-Drager Syndrome. Other uses include the
CC   utilisation of the activities such as: Immune system suppression,
CC   Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic
CC   and thrombolytic activity, cancer diagnosis and therapy, drug screening,
CC   assays for receptor activity, arthritis and inflammation, leukaemias and
CC   C.N.S disorders.
CC   Note: The sequence data for this patent did not form part of the printed
CC   specification.
XX
SQ   Sequence   1988 AA;


  Query Match             14.3%;  Score 154;  DB 22;  Length 1988;
  Best Local Similarity   21.0%;  Pred. No. 0.00056;
  Matches   64;  Conservative   58;  Mismatches   93;  Indels   90;  Gaps   10;

Qy       4 INKLFFDLAQEEENV----------------------LDAEF--LKNELDSVKAQLSQK 38
           |::|   ||::|| :                      | |:   |: : :| ||  ::
Db    1090 idelklqlakkeeelqgalargddetlhknnalkvvrelqaqiaelqedfesekasrnka 1149

Qy      39 DREKRDSQAIIDTLRDTLEERNATVESLQNALNKAEMLCSTLKK-----------QMKFL 87
           :::|||    :: |:  ||:   |  : |    | |   : |||           |:: :
Db    1150 ekqkrdlseelealkteledtldttaaqqelrtkreqevaelkkaleeetknheaqiqdm 1209

Qy      88 EQRQ----DETKQAREEAHRLK-----------------CKMKTMEQIELLLQSQR--- 122
            ||     :|  :  |:| | |                  |::| ::|::   : :|
Db    1210 rqrhataleelseqleqakrfkanleknkqgletdnkelacevkvlqqvkaesehkrkkl 1269

Qy     123 -SEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYEN----LKEARKA-------------- 162
            ::|:|:   :  |     :||     |: | :|    |:|| |
Db    1270 daqvqelhakvsegdrlrvelaekasklqneldnvstlleeaekkgikfakdaaslesql 1329

Qy     163 --TGELADRLKKDLVSSRSKLKTLNTE---LDQAKLELRSAQKDLQ----SADQEITSLR 213
             | ||     :  ::  |::: |  |   | : : |   |:|:|:    :   ::   :
Db    1330 qdtqellqeetrqklnlssrirqleeeknslqeqqeeeeearknlekqvlalqsqladtk 1389

Qy     214 KKSDD 218
           || ||
Db    1390 kkvdd 1394


RESULT  39
AAM41000
ID   AAM41000 standard; Protein; 1988 AA.
XX
AC   AAM41000;
XX
DT   22-OCT-2001  (first entry)
XX
DE   Human polypeptide SEQ ID NO 5931.
XX
KW   Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer;
KW   peripheral nervous system; neuropathy; central nervous system; CNS;
KW   Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic;
KW   amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic;
KW   chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
KW   leukaemia.
XX
OS   Homo sapiens.
XX
PN   WO200153312-A1.
XX
PD   26-JUL-2001.
XX
PF   26-DEC-2000; 2000WO-US34263.
XX
PR   21-JAN-2000; 2000US-0488725.
PR   25-APR-2000; 2000US-0552317.
PR   09-JUL-2000; 2000US-0598042.
PR   19-JUL-2000; 2000US-0620312.
PR   03-AUG-2000; 2000US-0653450.
PR   14-SEP-2000; 2000US-0662191.
PR   19-OCT-2000; 2000US-0693036.
PR   29-NOV-2000; 2000US-0727344.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Asundi V,  Chen R,  Ma Y,  Qian XB,  Ren F,  Wang D;
PI   Wang J,  Wang Z,  Wehrman T,  Xu C,  Xue AJ,  Yang Y,  Zhang J;
PI   Zhao QA,  Zhou P,  Goodrich R,  Drmanac RT;
XX
DR   WPI; 2001-442253/47.
DR   N-PSDB; AAI60156.
XX
PT   Novel nucleic acids and polypeptides, useful for treating disorders
PT   such as central nervous system injuries -
XX
PS   Example 2; SEQ ID NO 5931; 10078pp; English.
XX
CC   The invention relates to human nucleic acids (AAI57798-AAI61369) and
CC   the encoded polypeptides (AAM38642-AAM42213) with nootropic,
CC   immunosuppressant and cytostatic activity. The polynucleotides are useful
CC   in gene therapy. A composition containing a polypeptide or polynucleotide
CC   of the invention may be used to treat diseases of the peripheral nervous
CC   system, such as peripheral nervous injuries, peripheral neuropathy and
CC   localised neuropathies and central nervous system diseases, such as
CC   Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic
CC   lateral sclerosis, and Shy-Drager Syndrome. Other uses include the
CC   utilisation of the activities such as: Immune system suppression,
CC   Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic
CC   and thrombolytic activity, cancer diagnosis and therapy, drug screening,
CC   assays for receptor activity, arthritis and inflammation, leukaemias and
CC   C.N.S disorders.
CC   Note: The sequence data for this patent did not form part of the printed
CC   specification.
XX
SQ   Sequence   1988 AA;


  Query Match             14.3%;  Score 154;  DB 22;  Length 1988;
  Best Local Similarity   21.0%;  Pred. No. 0.00056;
  Matches   64;  Conservative   58;  Mismatches   93;  Indels   90;  Gaps   10;

Qy       4 INKLFFDLAQEEENV----------------------LDAEF--LKNELDSVKAQLSQK 38
           |::|   ||::|| :                      | |:   |: : :| ||  ::
Db    1090 idelklqlakkeeelqgalargddetlhknnalkvvrelqaqiaelqedfesekasrnka 1149

Qy      39 DREKRDSQAIIDTLRDTLEERNATVESLQNALNKAEMLCSTLKK-----------QMKFL 87
           :::|||    :: |:  ||:   |  : |    | |   : |||           |:: :
Db    1150 ekqkrdlseelealkteledtldttaaqqelrtkreqevaelkkaleeetknheaqiqdm 1209

Qy      88 EQRQ----DETKQAREEAHRLK-----------------CKMKTMEQIELLLQSQR--- 122
            ||     :|  :  |:| | |                  |::| ::|::   : :|
Db    1210 rqrhataleelseqleqakrfkanleknkqgletdnkelacevkvlqqvkaesehkrkkl 1269

Qy     123 -SEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYEN----LKEARKA-------------- 162
            ::|:|:   :  |     :||     |: | :|    |:|| |
Db    1270 daqvqelhakvsegdrlrvelaekasklqneldnvstlleeaekkgikfakdaaslesql 1329

Qy     163 --TGELADRLKKDLVSSRSKLKTLNTE---LDQAKLELRSAQKDLQ----SADQEITSLR 213
             | ||     :  ::  |::: |  |   | : : |   |:|:|:    :   ::   :
Db    1330 qdtqellqeetrqklnlssrirqleeeknslqeqqeeeeearknlekqvlalqsqladtk 1389

Qy     214 KKSDD 218
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RESULT 40
AAR42818
ID   AAR42818 standard; Protein; 1093 AA.
XX
AC   AAR42818;
XX
DT   27-APR-1994  (first entry)
XX
DE   TMF.
XX
KW   TATA modulating factor; TMF; transcription; TATA box; promoter; HIV-1;
KW   human immunodeficiency virus-1; short arm; human chromosome 3; p12-p21;
KW   translocation; cancer.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Region          437..850
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FT                          consensus sequence homology region"
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FT                          structure"
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FT                           structure"
FT   Region          1070..1078
FT                   /note= "Ubiquitin-mediated protein degradation
FT                          consensus sequence homology region"
XX
PN   WO9320106-A.
XX
PD   14-OCT-1993.
XX
PF   31-MAR-1993;   93WO-US03077.
XX
PR   02-APR-1992;   92US-0862025.
XX
PA   (TEXA ) UNIV TEXAS SYSTEM.
XX
PI   Gaynor RB,  Wu F;
XX
DR   WPI; 1993-336836/42.
DR   N-PSDB; AAQ49397.
XX
PT   New protein cellular factor - capable of binding double stranded
PT   HIV-1 tata region and activating gene expression of HIV-LTR
XX
PS   Claim 2; Fig 1; 75pp; English.
XX
CC   This sequence represents TATA modulating factor (TMF).  TMF is a
CC   protein of mol. wt. 123-130 kD which activates transcription in most
CC   genes, esp. in human immunodeficiency virus-1 (HIV-1) by binding to
CC   the TATA box region of the promoter.  TMF is encoded by the short
CC   arm of human chromosome 3 in the region p12-p21 which is often
CC   involved in translocations in patients having lung and other types
CC   of cancer.
XX
SQ   Sequence   1093 AA;


  Query Match             14.2%;  Score 153;  DB 14;  Length 1093;
  Best Local Similarity   22.6%;  Pred. No. 0.00034;
  Matches   53;  Conservative   49;  Mismatches   99;  Indels   34;  Gaps    5;

Qy      11 LAQEEENVLDAEFLKNELDSVKAQLSQKDREKRDSQAIIDTLRDTL---EERNATVESLQ 67
           |:::|:     |||  :|:  :|||    :||   :   | |:| :   :| :::: ||:
Db     441 lsekedvcktveflneklekreaqllslskekalleeafdnlkdemfrvkeesssissik 500

Qy      68 N--------ALNKAEMLC---STLKKQMK----------------FLEQRQDETKQARE 99
           :        |  | :: |      ||::|                |::: :: :   |
Db     501 deftqriaeaekkvqlackerdaakkeiknikeelatrlnssetadllkekdeqirglme 560

Qy     100 EAHRLKCKMKTMEQIELLLQSQRSEVEEMIRDMGVGQSAVEQLAVYCVSLKKEYENLKEA 159
           |  :|  :      |   |:::  | | |:  :      |::|      ||:  :  :|
Db     561 egeklskqqlhnsniikklrakdkenenmvakl---nkkvkeleeelqhlkqvldgkeev 617

Qy     160 RKATGELADRLKKDLVSSRSKLKTLNTELDQAKLELRSAQKDLQSADQEITSLRK 214
            |   |   :|   :      |  |  ::|: : : || |  | || :|:| | |
Db     618 ekqhrenikklnsmverqekdlgrlqvdmdeleeknrsiqaaldsaykeltdlhk 672


Search completed: September  4, 2002, 16:09:14
Job time: 8138 sec
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